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Businessweek**

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**Special
Issue**

**THE
YEAR
AHEAD
2016**

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50 COMPANIES
TO WATCH**

THE YEAR AHEAD 2016: THE WORLD IS DOOMED • THIS WILL SAVE IT — BUSINESSWEEK • YEAR 2016



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A Global Partnership That Works

Germany and the U.S. are a perfect industry fit



The global economy is set to grow by 3.3 percent in 2015 according to the IMF, rising to 3.8 percent in 2016. International economic confidence is returning, but much remains to be done to counter geopolitical change and risks in emerging economies. In an age of fluid global markets, the special economic relationship enjoyed by America and Europe is more important than ever before.

Together, Europe and the U.S. account for about one-third of global trade, and combined transatlantic GDP represents around half of global economic output. At the center of this robust interaction are the U.S. and Germany. The importance of the U.S. as an investor in Europe also cannot be overestimated—it drives 25 percent of investment projects, according to Ernst and Young (EY). The U.S. is also by some distance the largest investor in Germany.

The flip side of the coin is Germany's continued importance to the U.S. economy. Germany is the fifth biggest export market for the U.S., with \$47 billion worth in 2013 alone. As the seventh-largest investor in the U.S., Germany is also a major contributor to American economic growth and prosperity. More than 10 percent of in-sourced jobs in the U.S. are created by German-owned companies, making Germany the third-biggest foreign provider of jobs on American soil.

According to EY, a resurgent economy

In an age of fluid global markets, the special economic relationship enjoyed by America and Europe is more important than ever. And at the center of this robust interaction are the U.S. and Germany.

and a depreciating euro have helped increase the attractiveness of Europe as a manufacturing destination—equivalent to a 20 percent year-on-year increase in foreign direct investment levels. A seven percent investment increase saw U.S. companies create 39 percent more jobs in 2014 compared to 2013.

Germany's economy is also in excellent shape. Employment levels are at an all-time high, with unemployment rates continuing to fall and labor market developments making a real difference to the wider economy. All of which contributed to a GDP increase of 1.5 percent in 2014 (GDP total of €2.9 trillion), with the German government forecasting a GDP increase of 1.8 percent for 2015 and 2016 respectively.

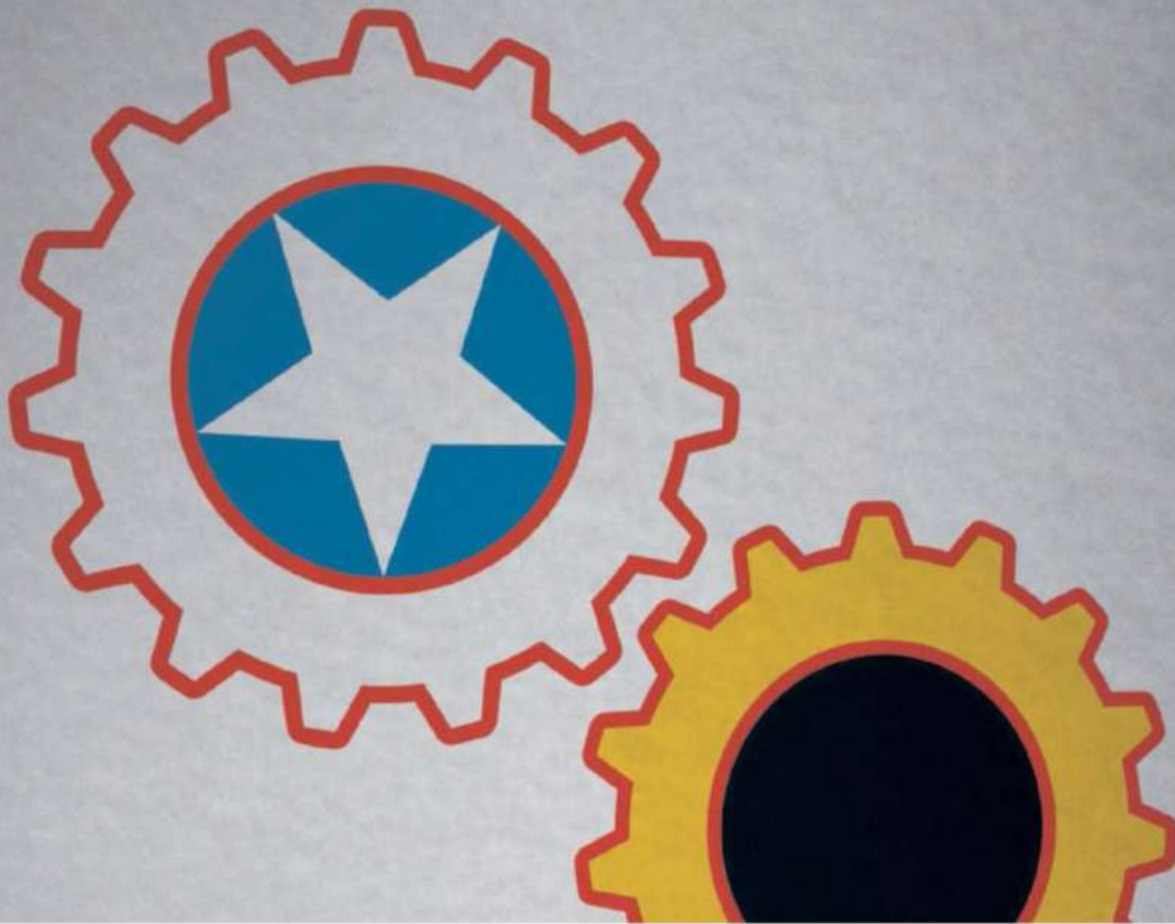
These are all auspicious signs for the HANNOVER MESSE 2016, the world's leading industrial technology expo, at which the U.S. will be the partner country for the first time. With both the U.S. and Germany putting advanced manufacturing in the policy foreground, the event promises to provide a technology showcase for increasing the already strong flow of trans-Atlantic trade and investment.

Training programs like MAT² in Michigan, KY FAME in Kentucky, and the ICATT initiative in Illinois have successfully looked across the Atlantic to Germany's dual education system to redress the problems of a widening skills gap and a depleted workforce. A number of German companies are playing an instrumental role in supporting these endeavors, ranging from automotive supplier BorgWarner to photonics provider Jenoptik and mechatronics technology supplier Wittenstein. In January 2015, automation technology provider offshoot Festo Didactic opened a "CPCC Learning Center of Excellence" in Eatontown, N.J. The National Network for Manufacturing Innovation (NNMI) is providing a research infrastructure for science and industry partners in much the same way as Germany's environment of industry clusters does to innovative start-ups and SMEs.

The factors that make Germany so attractive for U.S. investors—a strong manufacturing base, technological leadership and a highly skilled workforce—are also opening doors for German SMEs in the U.S.

Looking to the future, Germany and the U.S. remain united by a shared sense of purpose and vision. Free trade remains the motor for growth and employment on both sides of the Atlantic. So while many countries may talk of a "special relationship" with the U.S., in the case of Germany it's actually true. — David Gould

The perfect industry fit.



Together Germany and the US keep the wheels of the global economy turning. The transatlantic economy accounts for around half of global GDP, with US-German trade at the heart of this activity.

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TOP INTERNATIONAL BUSINESS TRAVEL HACKS

1 Own a private aisle

On planes with a 3-3-3 or 3-4-3 seat configuration choose either aisle seat in the middle section to reduce by half the chances you'll have to exit your seat so others can get out (or that you'll be climbed over by your seatmates).

2 Go paperless

Using Air Canada's mobile app for advanced check-in and storing your boarding pass just makes sense. And with all long-haul planes offering seat-back power ports, your laptop will never run out of juice.

3 Left is right

On return trips ending in the U.S., you can clear customs in a matter of minutes in major Canadian airports. You'll be able to walk right out of the airport upon landing in the U.S. Choose lines to your left—they move faster, studies show.

4 Routine decisions

Impose a measure of control over the chaos of travel by establishing routines. Always put your money, keys and phone in the same place in all hotel rooms. And always sleep either closest to the window or the bathroom. Rely on your own alarm to wake you up.

5 Rest easy

Air Canada's Boeing 787 Dreamliners feature lights that fight jet lag, and International Business Class offers fully lie-flat seats, ensuring you're rested and ready for business when you land.



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Air Canada's Premium Economy seats are larger than normal, its renovated Business Class lounge is just steps from the international gates—and you can earn miles in the Star Alliance frequent flyer program of your choice. Plus, on return, you can avoid long lines by quickly clearing U.S. Customs.



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WHERE PHYSICAL AND DIGITAL WORLDS MEET

Hitachi's Internet of Things That Matter is upgrading global infrastructure and improving lives for generations to come

A Fitbit can help you shed pounds, and a Nest thermostat can help you trim your carbon footprint. But the Internet of Things—the network of connected objects that is projected to reach 30 billion devices by 2020, according to McKinsey & Company—can be about so much more. In fact, if you ask one of the companies pioneering these technologies, IoT can lead to true Social Innovation.

"Hitachi is looking to do great things for society by leveraging the Internet of Things," says Sara Gardner, CTO of Social Innovation and Global Industries, Hitachi Data Systems (HDS). The company has even coined a term to highlight that priority: "When we say the Internet of Things That Matter, it means we are addressing challenges using data, but doing it on a much wider scale to solve societal problems that will impact the future."

The company has dedicated an entire Social Innovation unit to this goal, with 600 employees divided into both technology and vertical teams (mobility, telecommunications, healthcare, etc.) and given access to a pool of over 500 data scientists—many with Ph.Ds. in mathematics. Together, they are committed to creating a better society through IoT strategies.

Hitachi's potential in this space comes from its 105-year history of building many of the things that comprise the Internet of Things. "We are both a mature industrial and an IT player, so we created a business unit to facilitate that collaboration," Gardner explains. Because of this experience, Hitachi can create comprehensive real-world applications that are differentiated from the back-office ones typically associated with traditional analytics.

Thanks to its cyber expertise, Hitachi is able to take a torrent of raw data, process it quickly and learn from it. By turning descriptive analytics into predictive analytics, Hitachi can optimize an entire supply chain and identify early-warning signals. Gardner offers preventive maintenance as an example:

Using Hitachi technology, a failure that might have required two weeks of downtime for costly repairs could instead be intercepted and addressed before it becomes catastrophic.

With more sensors generating more information, it takes a company like Hitachi to separate the signal from the noise. "You have a pool of data and a business goal, but you have to stitch those two together," says Gardner. "It's not a straightforward case of knowing some algorithms; you've got to understand what that data means."

While some companies are only beginning to dip their toes into the IoT waters and focusing on lowering near-term costs, Hitachi is focused on higher-impact use cases, extending their industry expertise through acquisition as appropriate. The company's June acquisition of Pentaho, and its suite of open-source business analytics software, will enhance its Big Data analytics. And Hitachi Visualization—formed from two companies started by implementing and integrating urban surveillance systems—has evolved into a solution that manages data from public safety, smart city and operational systems, with the ability to leverage that data not just for real-time situational awareness, but also to predict where future problems might occur.

The Internet of Things That Matter is sure to touch everyone's life—if it hasn't already—which is why Hitachi feels a special

responsibility to use it to transform business and society alike. That has been the company's approach since it was founded in 1910.

"We believe that because we are both building equipment and have the IT and analytics expertise, we're in a unique position to have an impact on challenges facing our customers and society," Gardner says. "You can't help but be excited by how data can be applied to solutions that will create a safer, smarter, healthier world, now and in the future." — *Mike Olson*



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Imagine if our kids and their kids could wake up to a better world. Where energy is cleaner and fresh water always plentiful. Where traffic jams are rare and everyone has access to the individual healthcare they deserve.

At Hitachi, we believe Social Innovation can help make these and many other social dreams a reality. And we're committed to leading the way.

Using our innovative IT and advanced infrastructure systems, we've already created solutions to improve quality of life. And with the world evolving beyond imagination, we need to constantly be evolving too. We're now connecting different infrastructure systems like energy, water and transportation, so we can share resources and respond effectively to world changes. That's just one of the many ways we're innovating to make a lasting impact.

Hitachi Social Innovation. It's our legacy for generations to come.

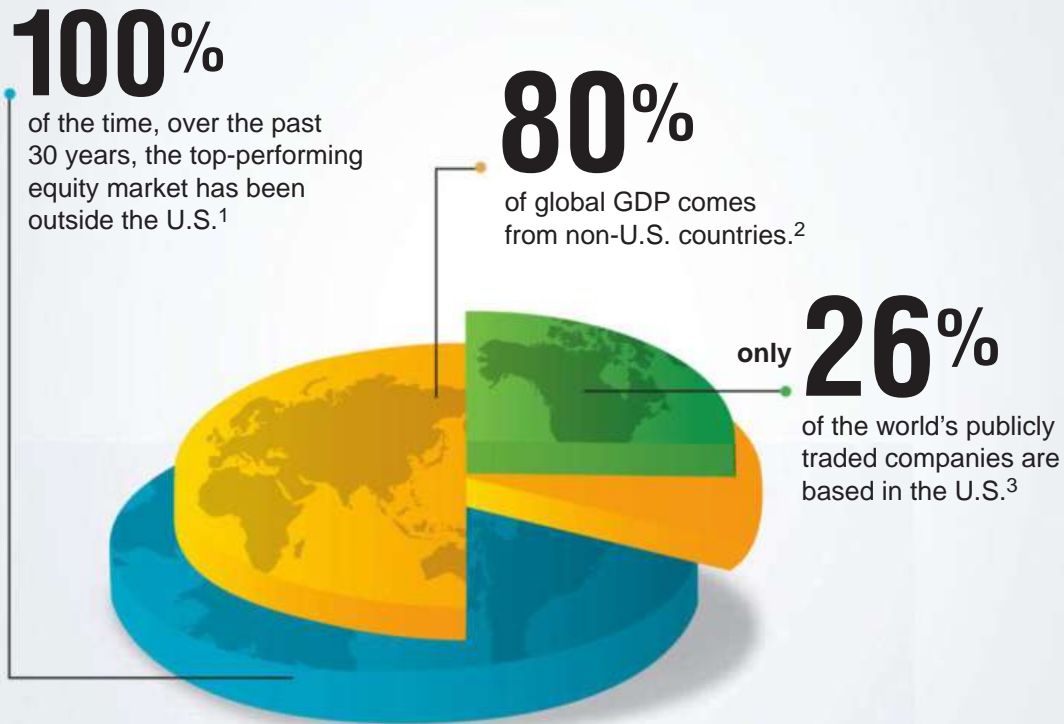
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Stock markets are volatile and can decline significantly in response to adverse issuer, political, regulatory, market, or economic developments. Foreign securities are subject to interest rate, currency exchange rate, economic, and political risks, all of which are magnified in emerging markets.

¹Source: MSCI All Country benchmark returns 1983–2013.

²Source: Gross domestic product based on purchasing-power-parity (PPP) share of world total. IMF, Haver Analytics.

³Source: FactSet as of 11/30/2013. Data presented for the MSCI AC World Index, which represents 44 countries and contains 2,436 stocks. The index is not intended to represent the entire global universe of tradable securities.

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EARTH 2116

IN THE NOT SO DISTANT FUTURE



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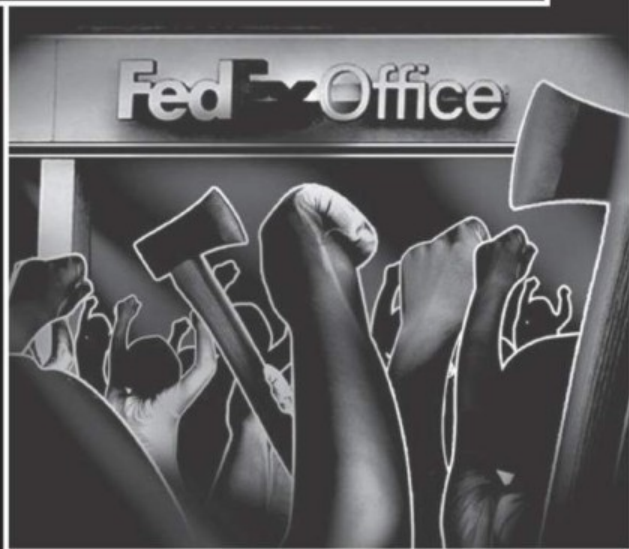
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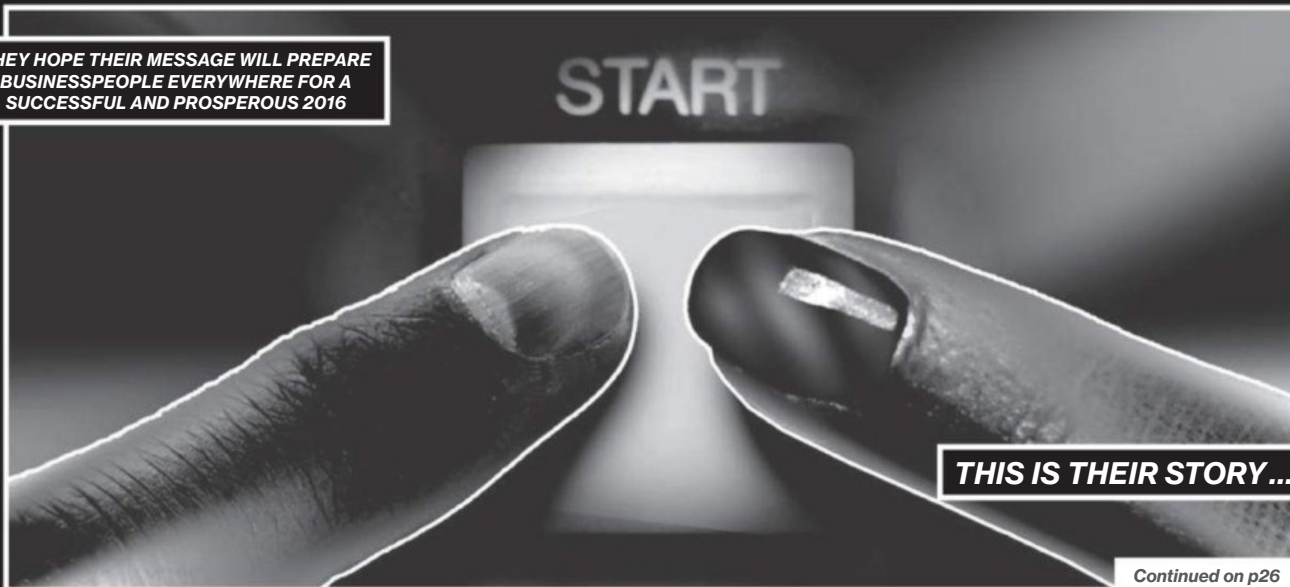


THE EDITORS HACK AN OLD FAX MACHINE AND TRICK IT OUT FOR TIME TRAVEL

THEIR AIM IS TO TRANSMIT A SPECIAL ISSUE OF BLOOMBERG BUSINESSWEEK



THEY HOPE THEIR MESSAGE WILL PREPARE BUSINESSPEOPLE EVERYWHERE FOR A SUCCESSFUL AND PROSPEROUS 2016



THIS IS THEIR STORY...

Continued on p26

Editor's Letter

Predicting the future is always a dangerous sport, and in truth there's no way to guess next year's oil prices and global GDP or what's going on in the heads of Janet Yellen and Mario Draghi. In our third annual Year Ahead issue we've provided data, insight, and analysis to help you prepare for what will be an unpredictable year.

We open this year's edition with a global overview by Peter Coy. He takes readers on a world tour—with visits to China, the Middle East, and other economic hot spots—to explain why robust growth remains elusive, despite the likelihood that the U.S. will continue to chug along. The magazine's next five sections—global economics, technology, retail, energy, and politics—provide an in-depth look at the people and enterprises that will shape 2016.

Then we showcase 50 companies to watch. The list, compiled by our colleagues at Bloomberg Intelligence, is accompanied by a delicious set of data, complete with the basics—sales and earnings-per-share growth plus total return—and metrics highlighting the challenges the companies face.

Putting together this issue is not nearly as daunting as the mission our avatars undertake in the accompanying graphic novella, which we hope you'll enjoy. We benefited greatly from the contributions of Bloomberg Intelligence and its 235 analysts covering 4,000 companies. We also relied heavily on many of Bloomberg's 2,400 journalists in 150 news bureaus around the world. *Bloomberg Businessweek's* editors, writers, and designers could not have produced this special edition without the talented copy editors and production team behind the scenes who help us polish every issue.

Finally, on Nov. 9 and 10, we'll host our annual Year Ahead summit in New York. Speakers, including Brian Moynihan of Bank of America, Tidjane Thiam of Credit Suisse, Angela Ahrendts of Apple, and designer and entrepreneur Diane von Furstenberg, will share their insights on next year's business challenges. Welcome to the Year Ahead. —Ellen Joan Pollock



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OUTLOOK

Prepare For an OK-ish 2016

“A return to robust and synchronized global expansion remains elusive,” says the International Monetary Fund

BY PETER COY

Sometime around April 2016, a third set of locks on the Panama Canal will begin handling ships as much as 2.6 times the size of the biggest ones now able to ply the waterway. U.S. ports from New York to Galveston, Texas, have been gearing up for the traffic. The Port of Houston Authority just finished installing four cranes that are 30 stories high. “More trade means more jobs,” Port Chairwoman Janiece Longoria said earlier this year.

The opening of the Panama Canal locks is just one likely event in what promises to be an eventful year for the global economy. The Trans-Pacific Partnership trade agreement could win approval from 12 nations that together account for 40 percent of global output. There will be presidential elections in the U.S. and Taiwan, a Summer Olympics in Brazil, and a new five-year plan in China. The biggest event of all could be a referendum in the U.K.—possibly in October—on whether to remain part of the European Union.

The world economy next year is shaping up to be stronger than in 2015 and roughly in line with long-term growth averages, according to the International Monetary Fund and economists surveyed by Bloomberg. But “a return to robust and synchronized global expansion remains elusive,” the IMF said in its October outlook. The fund’s economists project world growth of 3.6 percent, up from 3.1 percent this year and about the same as the 3.5 percent average from 1980 through 2014. Those numbers are based on the IMF’s preferred method of measuring output, using the real purchasing power of national currencies. Measured the standard way—using market exchange rates—the IMF’s projections

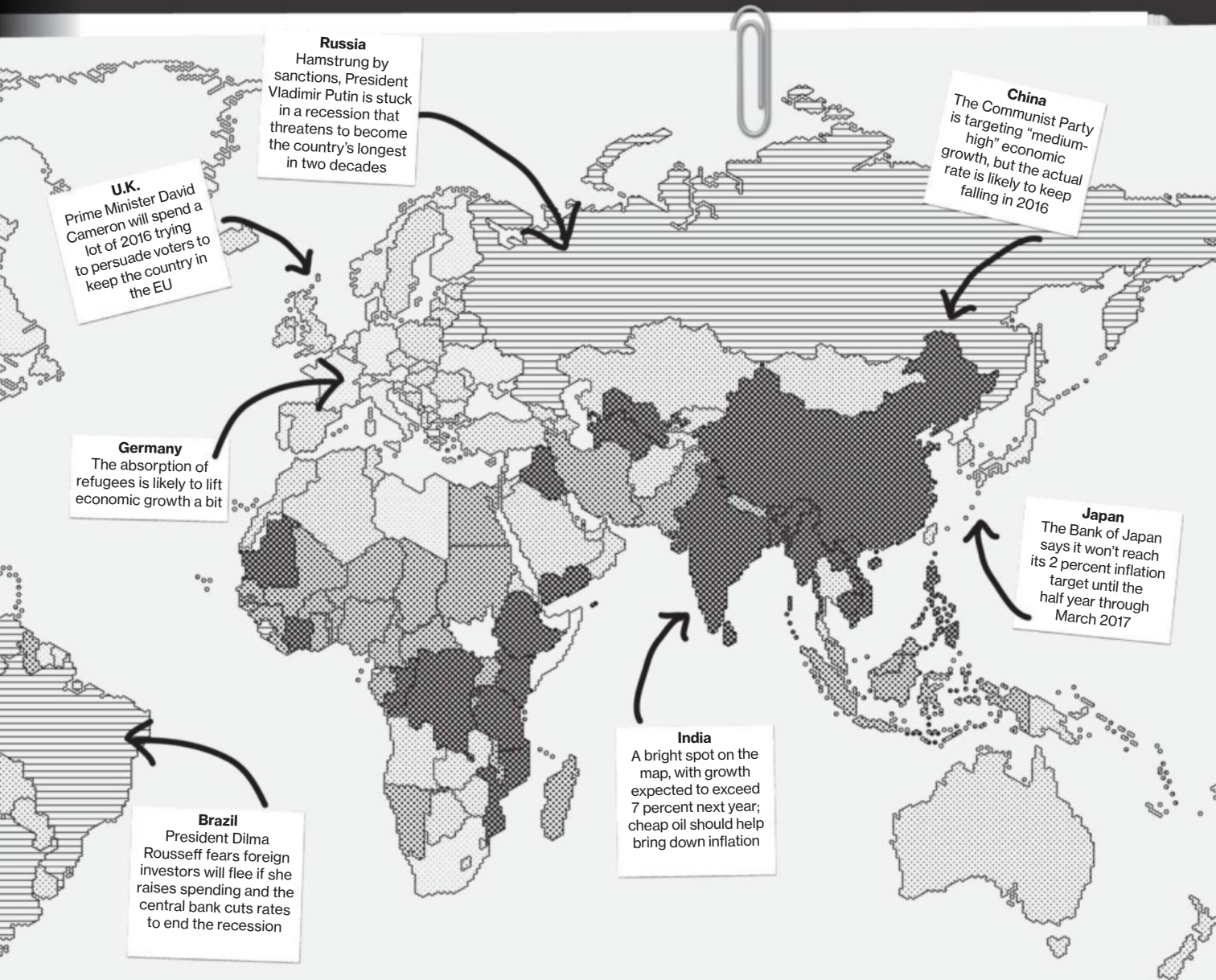


Where to find growth next year

and historical figures would be about 0.6 percentage point lower.

The coming year will be “OK-ish,” says Adair Turner, former chairman of the U.K.’s Financial Services Authority and author of a new book, *Between Debt and the Devil*. More pessimistic than the consensus, he worries there will be undeclared currency wars as Europe and Japan try to cheapen their money to boost exports and employment at home—essentially stealing growth from their trading partners.

Here’s the mainstream outlook in a nutshell: China will continue to decelerate. The U.S. will continue to outperform its rich-nation peers. With global demand soft, the price of money (interest rates) and the prices of oil and other commodities are likely to remain low. Central bankers Janet Yellen, Mario Draghi, and Haruhiko Kuroda will be in the spotlight as the



Federal Reserve attempts to nudge rates higher and the European Central Bank and Bank of Japan look for ways to stimulate growth.

The most important variable for 2016 is China, where the annual gross domestic product growth rate dipped below 7 percent in the third quarter of 2015 for the first time since the 2008-09 financial crisis. Developing nations that have come to depend heavily on China as a customer for their resources include Brazil, Chile, Indonesia, Malaysia, the Philippines, South Africa, Thailand, and Vietnam. But the world's appetite for Chinese goods isn't growing at the same pace anymore, and China has no urgent need for more of the infrastructure it's been furiously building. Like his predecessors, President Xi Jinping is having a tough time guiding the economy toward domestic consumption as a new source of growth. "China finds itself in a

particularly tricky starting position," Louise Keely, president of the Demand Institute, a venture of Nielsen and the Conference Board, wrote in an August blog post.

The IMF projects that China's growth will slow to 6.3 percent in 2016, from 6.8 percent this year. That's tolerable, albeit seemingly below the "medium-high" growth the country's leaders said again in October that they want. More pessimistic is Willem Buiter, chief global economist of Citigroup. "We consider China to be at high and rapidly rising risk of a cyclical hard landing," he wrote in September, citing excess capacity and high debt loads. With Russia and Brazil already in recession, a sharp slowdown in China would drag other emerging markets down, Buiter warned. Most rich nations depend less on exports to China, so they "will not experience recessions themselves but will merely grow more slowly," he wrote.

cont. →

Cheap oil is one key factor that makes most economists more optimistic than Buitert. While the low price harms exporters, including Russia and members of OPEC, it boosts importing nations in the developing world—most of Latin America, Africa, and Asia, including China. Cheap oil also helps developed nations such as the U.S., but fuel costs are a smaller portion of their total expenditures.

Unfortunately for macroeconomists, oil prices are even less predictable than the Chinese economy, depending on everything from OPEC politics to strife in the Middle East. One theory says the price of crude could drop below \$40 a barrel next year, because production is exceeding consumption and the world is running out of places to store the excess. An unprecedented amount of crude is afloat on tanker ships while its owners look for buyers. Oil bulls counter that the low price will depress exploration and production enough to create shortages and drive the price back up. Emad Mostaque, a strategist for Eclectic Strategy in London, says a barrel of oil could fetch \$100 or even \$130 by 2017. Between those two extremes, traders are betting that prices will rise only a bit, with the Brent crude benchmark reaching \$56 a barrel by the end of 2016, up from about \$49 now.

Some of the benefits of cheap oil might be undone by unusually bad weather around the Pacific Rim. What's shaping up to be one of the three strongest El Niños since 1950 will cause "major disruptions, widespread droughts and floods," says Kevin Trenberth, distinguished senior scientist at the National Center for Atmospheric Research in Boulder, Colo. He estimates the El Niño of 1997-98 killed at least 30,000 people and caused \$100 billion in damage.

For the U.S., 2015 was supposed to be the year the economy was finally healthy enough to get off the life support of near-zero interest rates. Yet the Federal Reserve has pushed off its first hike in the federal funds rate to the very end of the year—Dec. 16—at the earliest. March 2016 is looking more likely. There's even a slim chance that it will delay liftoff past the end of 2016.

Judging from the misery index, which combines the latest reported inflation rate and unemployment rate and was 5.1 percent in October, the U.S. economy is as good as it's been since the 1950s. But if the misery index is this low, why are so many people miserable? One big reason is that wages haven't risen as much as they usually do when the jobless rate is this low. According to Sentier Research, median household income in

cont. →

THE OUTLOOK FOR WORLD GROWTH

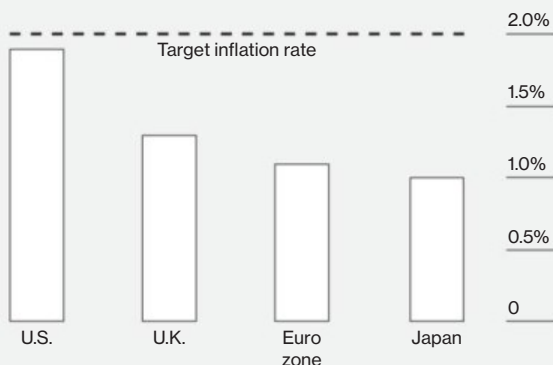
Annual increase in gross domestic product



Central banks will miss their inflation targets ...

INFLATION

2016 projected inflation rates

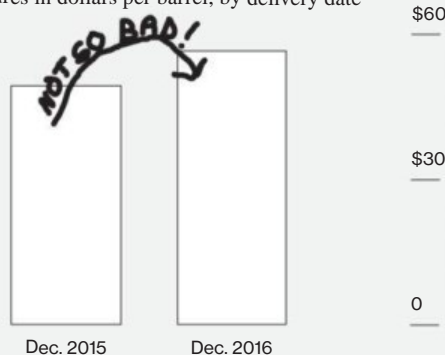


DATA: BLOOMBERG SURVEY OF ECONOMISTS

... as oil remains cheap

OIL FUTURES

Brent crude futures in dollars per barrel, by delivery date




DATA: COMPILED BY BLOOMBERG

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Capital Creates a Fresh Perspective

Can business contribute to a sustainable future? Absolutely. Morgan Stanley helped Unilever point the way forward, raising £250 million (\$415 million) with a first-of-its-kind green bond offering. That capital went toward projects that promote Unilever's vision of reducing waste, water use and greenhouse gases compared with 2008 levels. In new factories funded by this green bond, Unilever is committed to cutting in half CO2 emissions, water use and waste. Now Unilever can have less impact on the planet. Capital creates change.

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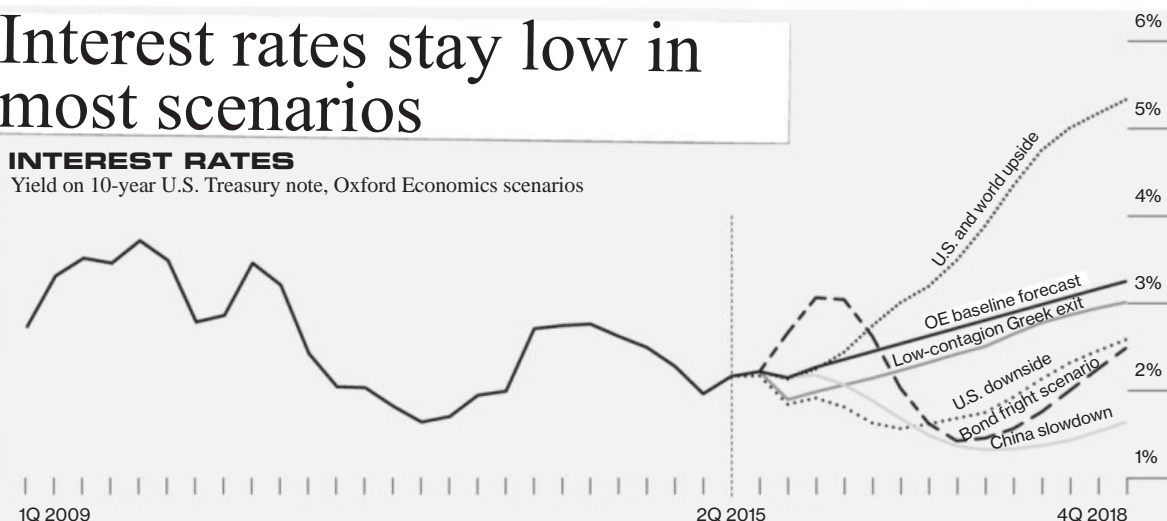


The statements, "first-of-its-kind green bond offering," and "Unilever's vision of reducing waste, water use and greenhouse gases compared with 2008 levels" and "In new factories ... Unilever is committed to cutting in half CO2 emissions, water use and waste" are based on Unilever's project selection criteria, communicated in the company's press release dated March 19, 2014. The exchange rate used to calculate "\$415 million" was the exchange rate as published by Bloomberg on March 19, 2014, of 1.6644. For further details and information about Unilever's green bond issuance, please see Unilever's press release dated March 19, 2014. © 2015 Morgan Stanley & Co. LLC. Member SIPC. CRC 1297328 10/15.

Interest rates stay low in most scenarios

INTEREST RATES

Yield on 10-year U.S. Treasury note, Oxford Economics scenarios



September was 1.7 percent lower than in January 2000 after adjusting for inflation. Wages are expected to grow a bit faster in 2016: Private companies surveyed by PricewaterhouseCoopers in the third quarter predicted they'd raise wages next year by 3.1 percent, the first time since 2008 the number hasn't been below 3 percent.

The upside of America's slow growth is that the economy is way short of inflationary overheating, so there's no need for the Fed to jack up rates rapidly and potentially kill the expansion. "Recessions come out of excess," says Liz Anne Sonders, chief investment strategist at Charles Schwab. "We're still in recovery mode. We're not even in expansion mode."

American families have paid off debt since the 2007-09 recession, and they have pent-up demand, particularly for housing. "The millennial generation is moving out of the basement of their parents' homes," says Steve Rick, chief economist of CUNA Mutual Group, which sells insurance and investments to credit union members.

Strength in consumer spending could embolden businesses to invest to upgrade plants, equipment, and software. The updates are overdue. "If anything, both consumption and investment have been too weak throughout this expansion," Deutsche Bank Chief Economist Torsten Slok wrote to clients in October. "As a result, I continue to believe that we are several years away from the next recession."

Europe and Japan are weaker. Unlike the U.S. economy, which has grown slowly but steadily since 2009, both have suffered periodic setbacks. The ECB could push short-term interest rates deeper into negative territory even before 2016 starts, and the Bank of Japan is getting ready to increase bond purchases to lower long-term rates.

The Greek financial crisis, out of the headlines now, could wind up back on Page 1 by late 2016 if Prime Minister Alexis Tsipras can't win approval for the spending cuts, tax hikes, labor-market reforms, and privatizations that creditors have demanded. After observing the Greek tragedy from afar, British citizens are glad they kept their pound sterling. Next October

they'll go to the polls for a referendum on a more radical step: leaving the EU entirely. An "out" vote "would seriously undermine business confidence in Europe," says Russ Koesterich, global chief investment strategist for BlackRock, the big asset manager.

Europe's refugee crisis is a fresh stress on the EU. The strange thing is that it may stimulate short-term economic growth, at least in Germany. "We think it will be a boost for GDP," says Malte Rieth, head of global economic forecasting at the German Institute for Economic Research in Berlin. The organization, known by its German acronym DIW, calculates that the government will give aid to the refugees, who in turn will spend it, mostly on domestic goods and services, adding 0.1 percent to 0.2 percent of GDP growth.

Developing nations are watching the Federal Reserve, concerned that investors will yank money away from them and invest it in the U.S. when the Fed hikes rates. The fears are probably misplaced. Investors have had at least two years to move their money around. "Surely few would be taken by complete surprise when the FOMC [Federal Open Market Committee] finally gets on with the job of raising interest rates, probably in March," economists at Capital Economics wrote in October.

It's been a hellacious year for Brazil (political crisis, oil) and Russia (sanctions, oil). The IMF is expecting both countries' economies to continue shrinking in 2016, but not as rapidly. No other major economies are expected to be in recession next year. The IMF looks for India to outpace China again, accelerating slightly to 7.5 percent growth, while Mexico grows 2.8 percent, Nigeria expands 4.3 percent, and South Africa manages a bare 1.3 percent increase in output.

OK-ish growth might just be as good as it gets from here on, says Stephen King, senior economic adviser to HSBC in London. He argues that the strong world growth of 1950 to 2000 was an anomaly and says the world economy is returning to the slower pace of the preceding 150 years. In other words, it's not just a matter of applying the right stimulus here and there. "The problem," King says, "is deeper."

END

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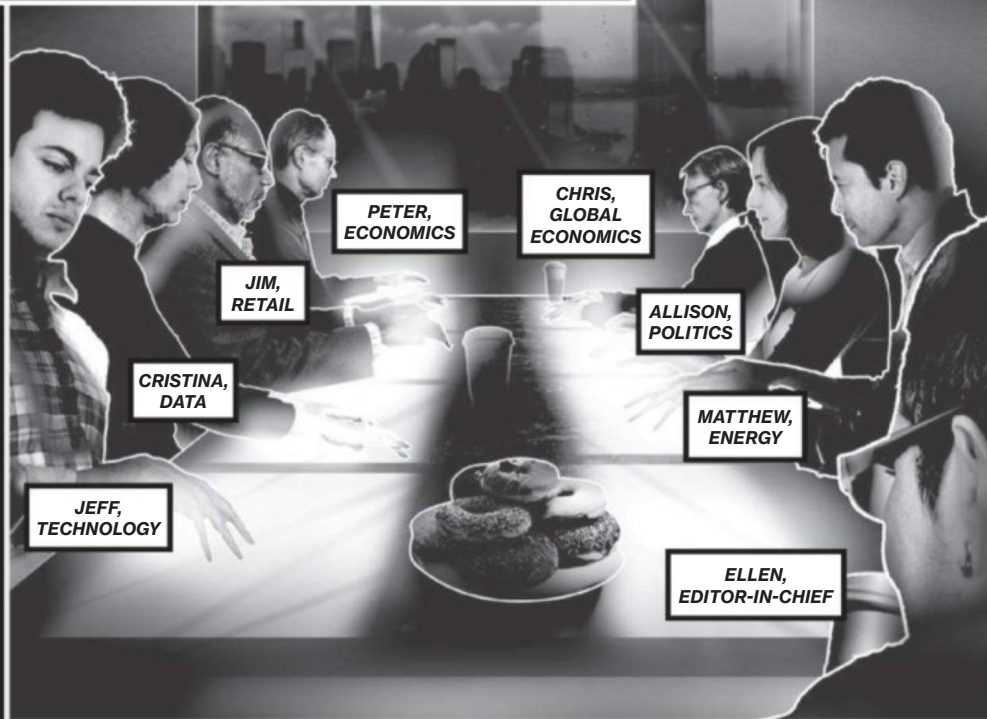
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OUTSIDE, ANGRY TEENS PROTEST FREE MARKETS

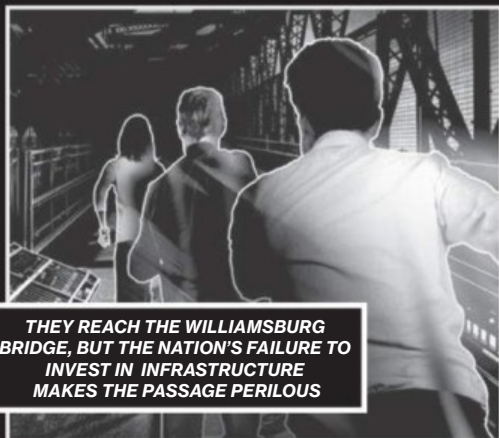


ELLEN MAKES THE CRITICAL DECISION TO ABANDON THE BUILDING AND SEND THE ISSUE BACK IN TIME



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LOSING HIS FOOTING, CHRIS MANAGES TO PASS THE GLOBAL ECONOMICS SECTION TO A COLLEAGUE



AS HE SWIMS TO SHORE, HE URGES THE EDITORS TO CONTINUE THEIR QUEST

Continued on p42

GLOBAL ECONOMICS

EDITED BY CHRISTOPHER POWER AND CRISTINA LINDBLAD

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REFORM

China's Consumers Need to Step Up

The leadership is trying to refocus while resorting to old-fashioned stimulus **BY DEXTER ROBERTS**

China's practice of laying out five-year economic plans is a legacy of its Maoist past. And so, as the Communist Party has done since the 1950s, officials met in Beijing in October to hash out the plan to take the world's second-biggest but now struggling economy from 2016 to 2020.

Policymakers have two big goals. In 2016 they'll continue to feature the consumer as the star of a hoped-for economic resurgence. They'll also try to ensure by any means necessary that gross domestic product doesn't slow rapidly, even if that involves injecting more credit into overleveraged, declining industries. China will target "medium-high economic growth," the Party said in an Oct. 29 communiqué after meeting to discuss the new five-year plan.

Those two goals—fostering a consumer economy and giving GDP a short-term boost—are contradictory. Developing a consumption-driven economy means accepting growth below the 7-plus-percent annual rise of recent years, which was achieved in part by state-run banks and local government finance companies giving enterprises cheap credit to build often unneeded factories and real estate developments. For many economists, it's a no-brainer to switch to this slower-growing but more sustainable model, one that relies on a strong service sector and robust household consumption. The dramatic growth of the last 35 years has brought serious industrial overcapacity, a polluted environment, and declining productivity even as the workforce shrinks.

In October, days after the announcement that GDP rose in the third quarter at a rate of 6.9 percent from a year earlier, the slowest pace since 2009, the central bank cut rates for the sixth time in a year. It also lowered the amount of funds banks must hold in reserve, allowing them to make more loans. Economic planners have loosened curbs on borrowing by local officials and stepped up approvals of railway and costly

environmental projects. Says Andrew Polk, senior economist at the Conference Board China Center for Economics and Business in Beijing: "Cutting interest rates and adding fiscal spending are temporary salves to much bigger problems. The leadership has very little power to stop the slide in growth into next year."

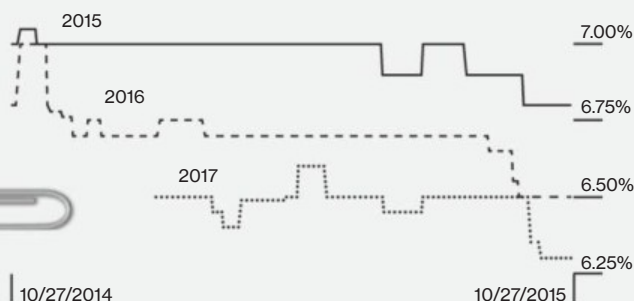
In the first quarter of 2015, for the first time, service industries—including jobs from lawyers to tourist guides—made up a bit more than half of GDP. The service economy grew 8.4 percent in the first nine months; manufacturing, only 6 percent. "The answer to the question of whether China's economy is sinking or swimming lies in its service sector," wrote Capital Economics' Mark Williams and Chang Liu in an Oct. 29 note.

Service companies employ more people than manufacturers to generate the same amount of GDP. Not only are service workers more numerous, they're also often better paid than factory hands. More Chinese with more money in their pockets should nurture consumption. To date, that's been hard to engineer, with households socking away about 30 percent of disposable income, one of the world's highest savings rates. Household consumption makes up only a little more than one-third of GDP. (In the U.S., consumption is almost 70 percent of the economy.) Most of China's population is of working age, when people save the most. Also, the Chinese don't trust the official social welfare network. While policymakers have spent billions of dollars improving health care, expanding a pension program, building schools, and hiring teachers, consumers have pushed the savings rate up about 7 percentage points in the past decade, says Andrew Batson, China research director at Beijing-based consulting firm Gavekal Dragonomics. The Chinese set aside money for medical and education costs, as well as for retirement, a tendency reinforced by decades of family planning, which have resulted in fewer children for retirees to depend on in old age. The late October decision to allow parents to have a second child isn't expected to substantially raise either birthrates or consumption anytime soon.

China's large number of lower-income households have limited spending power, says Gan Li, an economist at Southwestern University of Finance and Economics in Chengdu. About one-third of the population, or 430 million Chinese, are struggling, Gan says. "You can't force the rich to spend—they already have the money and don't need to be incentivized. The poor have the incentive to consume, but they don't have the money," he says. According

GROWTH FORECAST

Economists surveyed by Bloomberg have lowered their GDP estimates for China over the past year





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to his research, China's Gini coefficient, a measure of wealth disparity, is 0.61, among the highest in the world.

Consumption and services aren't yet ready to replace reliance on real estate, which still makes up one-quarter of China's economy when associated industries such as steel, cement, and glass are included, says Louis Kuijs, Hong Kong-based head of Asia economics at consulting firm Oxford Economics. While apartment sales recently picked up after Beijing loosened curbs on mortgages and canceled a sales tax for some buyers, construction has lagged because of overcapacity. China has 50 million vacant apartments, Gan estimates. "This whole physical sphere—real estate, steel, mining—is doing very badly, and there is little reason it will recover for a long time to come," Kuijs says. He predicts growth of 6.3 percent next year, below

the target of no less than 6.5 percent announced by President Xi Jinping on Nov. 3.

Ultimately, successful rebalancing will require giving farmers more rights to sell their land, allowing migrant workers to settle permanently in cities of their choice, and opening state-dominated service industries such as insurance and banking to private and foreign investors. So far, signs are discouraging: The planned reform of state-owned enterprises aims to build up national champions by merging companies, not privatizing or shrinking them. "To maintain momentum, they need to really keep reforming," says Albert Park, professor of economics at the Hong Kong University of Science and Technology. "What will happen with growth depends on what you believe is the path they are going to take."

END

FISCAL POLICY

India's Year of the Tax

Modi wants a nationwide sales tax to replace cumbersome state levies **BY BRUCE EINHORN AND KARTIKAY MEHROTRA**

Prime Minister Narendra Modi took power in May 2014, promising to make India a better place for business. Investors are still waiting. Stymied by opponents who control key parts of the government and distracted by controversies such as attacks on Muslims suspected of killing cows, Modi's Hindu nationalist Bharatiya Janata Party (BJP) has made good on only a few reforms.

His team says 2016 will be different. Modi faces an April 1 target for the launch of a nationwide goods and services tax (GST) that will do away with state sales taxes. The percentage rate of the new tax will be in the mid- to high teens.

Switching to a GST, a move business has urged for years, could increase revenue substantially, since any Indian who makes a purchase will pay the tax, says Rajiv Biswas, an economist in Singapore with research firm IHS Global Insight: The GST is "the one reform that's really crucial among the ones stalled." The federal government relies on customs and excise taxes for a big part of its budget. Only 3 percent of working-age

Indians pay federal income taxes, IHS says. Most farmers are exempt, as are workers at small businesses. Sticking with today's system, Biswas says, is "a lost cause."

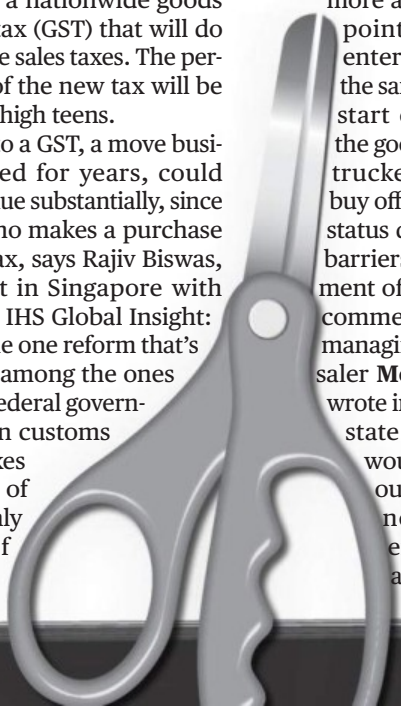
Although the income and excise taxes will remain in force, the real action will be the GST. Not only does it replace state sales taxes, ranging from 5 percent to 15 percent, it also ends the practice of imposing entry fees on goods coming from outside a state. Truckers can wait five hours or more at state border checkpoints, since they can't enter cities until 10 p.m., the same time state workers start collecting levies on the goods in the trucks. The truckers also must often buy off corrupt officials. The status quo creates "artificial barriers that hamper movement of interstate trade and commerce," Rajeev Bakshi, managing director at wholesaler **Metro Cash & Carry**, wrote in an e-mail. Replacing state taxes with the GST would "greatly enhance our ease of doing business." The GST, by speeding tax collection at state borders, would

help turn India into one market.

To start the GST in 2016, Modi needs parliament to act quickly. Both houses must approve the tax, but the BJP controls only the lower one. The upper house is dominated by the BJP's opponents. "This is legislation almost every politician, bureaucrat, and party fundamentally agrees on," says S.L. Rao, former chairman of the Institute of Social and Economic Change in Bangalore. Yet non-BJP politicians aren't keen to pass legislation that gives Modi a victory. The BJP blames the rival Congress party for blocking passage of the law. "The Congress strategy was to disturb the house and not allow it to function," says Finance Minister Arun Jaitley.

Even if Modi wins upper house approval, he'll also need the blessing of the states, which are reluctant to sign away a revenue source. "The timeline looks iffy at best," says R. Kavita Rao, professor at the National Institute of Public Finance and Policy, a think tank in Mumbai that's advised Modi. Still, "everyone knows the GST will help propel the economy when it passes," says Madan Sabnavis, chief economist at Credit Analysis & Research, a Mumbai-based credit rating service. "And it will pass."

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DECISIONS

What Will the U.K. Do?

The debate over membership in the European Union is heating up. Here are the main arguments **BY JILL WARD**

STAY: | GO: →

"BREXIT"

The U.K. benefits from the EU's clout in trade deals with other large markets.

EU membership means free movement of labor, giving the country access to a pool of skilled workers. Immigrants also contribute more than they take from public finances.

Membership grants the U.K. open access to a market of **500 MILLION** people. Leaving would mean tariffs on **90 PERCENT** of its exports to the EU.

British adults
polled Oct. 17-19

STAY:
52%

Red tape is not a reason to leave. Britain has the most competition-friendly regulatory environment in the developed world after the **Netherlands**—another EU member.

What does the rest of the world think?

Although British voters may not care, President **Obama** warns that the U.K. must stay in the EU to keep its influence on the world stage.

Chinese President Xi Jinping has also indicated he favors an EU that includes the U.K.

UNSURE:
9%

Leaving would free the U.K. to pursue its own trade deals with fast-growing economies. That should be a priority given Europe's poor economic performance.

EU membership means free movement of labor, and the U.K. needs control over its borders to protect local jobs. Immigration also means Britons are subsidizing public services and welfare for newcomers.

EU rules tie the economy up in red tape. Brexit would boost output by cutting the regulatory burden on businesses.

Exiting would free the U.K. from hefty contributions to the EU budget. The Office for Budget Responsibility estimates the country's net contribution will be about **€11.2 BILLION** this year.

The U.K. would have more influence on its own, regaining a seat at the World Trade Organization. Leaving the EU would allow more cooperation with the British Commonwealth without jeopardizing relations with Europe.

GO:
39%

To sum up:

Prime Minister David Cameron has promised a vote by the end of 2017, though it may occur as early as summer 2016. He wants to stay in the EU but hopes to renegotiate the terms of membership. Analysts say he'll try to limit the benefits immigrants can claim within the first few years of their arrival in the U.K. He also wants some protection against further political integration with Europe.

Regardless of the outcome, the runup to the vote will affect the economy, with HSBC analysts arguing in a recent report that the vote should be held sooner rather than later to limit the "potentially damaging uncertainty" surrounding it. "I would expect a negative impact," says Thomas Sampson, a specialist in trade at the London School of Economics. "It's fairly well established that where there's more uncertainty, businesses tend to delay investment."

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POPULATION

Korea Fears It Will Age Into Japan

The country's low birthrate will lead to a shrinking workforce

BY BRUCE EINHORN

Sometime in 2016, the size of South Korea's working-age population will peak at 37 million; then it will likely drop 1.3 percent by decade's end. "We have fundamental structural problems," says Kwon Tae Shin, president and chief executive officer of the Korea Economic Research Institute.

"The situation will be similar to Japan," says Lee Young Wook, a fellow at Korea Development Institute, a think tank in Seoul. Japan's population reached a high in 2008 and has fallen ever since. One in four Japanese is 65 or older, and the working-age population peaked in 1995. In South Korea, those 65 and older make up 13 percent of the population, up from 10 percent in 2007, according to Statistics Korea. By some measures, the problem is worse: At just 1.2 children per woman, Korea's birthrate is lower than Japan's 1.4. (To keep population steady, the rate needs to be just over 2.) A 2015 report by London-based nonprofit HelpAge International measured quality of life for the elderly in 96 countries. Japan made the top 10, but South Korea came in at 60, third-to-last among Organisation for Economic Co-operation and Development nations, ahead of Turkey and Greece.

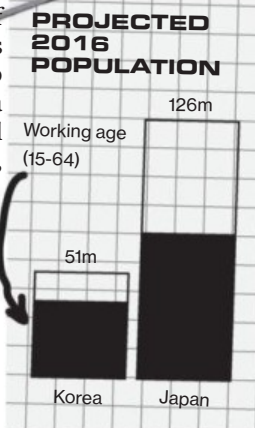
The aging population will hinder the Korean government's efforts to revive the listless economy, which has been plagued by decelerating

exports and weak demand at home. "It really does lower the potential growth rate," says Joseph Incalcaterra, an economist in Hong Kong with HSBC. A parliamentary report last year said gross domestic product would grow an average of 3.6 percent from 2014 to 2018. But the demographic changes will make that difficult to achieve. With domestic demand accounting for about half of GDP, South Koreans will have to come to terms with the effect a smaller labor pool will have on consumption, says Incalcaterra.

A shrinking workforce should create openings for younger workers. For now they're at a disadvantage. While the jobless rate overall is below 4 percent, average unemployment for workers age 15 to 29 is 9.6 percent, up from 7.7 percent in 2012, according to Emily Dabbs, an economist at Moody's Analytics. Many jobs available to young people are temporary, without the full benefits that older Koreans enjoy. About one-quarter of workers are in these temporary jobs. Koreans in the "aging part of the workforce" are the ones with permanent positions, says Adrian Mowat, chief Asian and emerging-markets equity

strategist at J.P. Morgan Securities. "The people in their late 20s and early 30s are the ones who are struggling." That exacerbates the population problem. "It's difficult to have a [higher] birthrate if you're not forming households," Mowat says.

To avoid falling into the same trap as Japan, where an aging population is weakening consumer spending, South Korea's government is trying to reform labor laws that discourage big companies from putting younger workers on the payroll. The aim is to make it easier to hire and fire and to base compensation on merit as opposed to seniority. President Park Geun Hye, who's never married, is also taking steps to encourage women to have children. Her government has announced policies to make child care, education, and housing more affordable. Korea Development Institute's Lee says those are good first steps, but employers must change, too, by shortening their family-unfriendly workdays. "Culture and policy have to work together," she says. In the meantime, Korea's workforce will get smaller and older.



GREECE'S DEBT WATCH

AUGUST 2015

Greece signs a third bailout deal with the European Commission, agreeing to sweeping reforms in exchange for fresh loans

FALL 2015

Greek lawmakers raise the retirement age, cut pensions, and increase the sales tax.

OCT. 31, 2015

After stress-testing the country's top four banks, the European Central Bank says they'll need €4.4 billion (\$4.8 billion) to €14.4 billion of additional capital.

NOV. 6, 2015

The deadline for banks to submit plans detailing how they'll raise the additional capital.

WINTER 2016

Euro area member states will discuss easing Greece's debt burden, following the successful completion of the first bailout review.

MARCH-APRIL 2016

Lenders will assess how much progress the country has made toward fiscal health. An unsatisfactory review could lead them to demand more austerity measures, again raising the question of a Grexit.

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MONEY

Russian Banks Face More Pain

The central bank will continue to shut down weak lenders

BY JAKE RUDNITSKY AND ANNA BARAULINA

A year ago, plunging oil prices sent the ruble spiraling to record lows and bank depositors scrambling to get their cash. **Sberbank**, Russia's biggest lender, ran through tremendous amounts of cash to survive a run it dubbed Black December—300 tons of it, 1.3 trillion rubles (\$20.8 billion), in a single week. “All we could do was relax and pray,” Sberbank Chief Executive Officer Herman Gref says, recalling the worst moment in his eight years of running the state-controlled lender.

Sberbank's deep pockets ensured its survival, and the government soon rolled out a 900 billion-ruble plan to bail out other big lenders. Smaller banks weren't so lucky. This year regulators will shut down or take over a record number of institutions.

Largely cut off from international financing by U.S. and European sanctions, and concerned about the outlook at home as the economy heads into a second year of recession, Russia's bankers have shied away from making new loans. That's a big problem for the Kremlin, which is counting on domestic investment to revive growth. Instead, with the economy forecast to shrink again next year, Moody's Investors Service expects bad loans to reach peaks last seen in the crisis of 2009. The central bank says it will continue to purge weaker lenders.

“We now have full stagnation,” says Oleg Vyugin, chairman of **MDM Bank**, a top-30 lender. “Demand for loans from high-quality borrowers is very limited, as they remain uncertain about future income. Insolvent borrowers would be happy to take a loan, but banks are not ready to lend to them.”

Maxim Shkadov, who runs **Kristall**, Russia's biggest gem polisher and a major exporter, says the weak ruble—it's lost half of its value since oil began to slide in 2014—slashed his local costs in dollar terms. “We don't have any problems getting loans, because banks have plenty of cash and can't find anywhere to put it,” he says. But demand for his diamonds is weak, so he's paying down debt, not adding to it, Shkadov says.

Businesses that earn money in rubles say high interest rates—15 percent or more on one-year loans—are keeping

them from borrowing to expand. **PiR**, a cheese wholesaler, saw much of its competition vanish after Russia banned the sale of European dairy products in retaliation for the sanctions. Yet its executives say PiR can't afford to borrow to invest in the business. “It's impossible to even talk about serious growth,” says Vice President Pavel Bozhko. Interest on the company's loans has “cut into our operating profit so much that we're thinking less about profitability than avoiding losses.”

Private banks are being careful. “We will be paying a lot more attention to the quality of borrowers,” **Alfa Bank** CEO Alexey Marey says. Russia's second-largest private lender has cut back on loans to small and midsize businesses and has no plans to build market share.

This year the central bank has shut down banks at the rate of almost two a week, closing about 9 percent of the total. Regulators say more will be closed. “The central bank says that revoking banking licenses will soon be an extraordinary event,” says Artem Konstandian, head of **Promsvyazbank**, Russia's 11th-biggest lender. “We will get to that point eventually, but I don't think it will be anytime soon.” Nonperforming loans have risen to 14 percent, from 11.5 percent at the start of the year, and are still growing. Banks have put aside 961 billion rubles in loan-loss provisions so far in 2015. Sberbank is offering a special deal to companies that have seen their lenders fail: New corporate clients can get three months of regular banking services at Sberbank for just 1 ruble a month instead of the usual 2,200-ruble fee. The offer's valid through the end of 2016. —With Andrey Leshenko

END

NICOLAS MADURO President, Venezuela



CHALLENGES
Tame inflation,
reconcile with political
opponents

HOT SEAT

Venezuelan President Nicolás Maduro faces a tumultuous year, regardless of the outcome of Dec. 6 elections that could see his socialist party lose control of the legislature. The economy is voters' top concern. The collapse in oil prices will shrink gross domestic product 10 percent this year and 6 percent the next, according to the International Monetary Fund. An inflation rate of

159 percent is pushing millions back into poverty. In a September poll, fewer than 20 percent said they'd vote for the government's candidates. A disputed election result could trigger protests and a crackdown by pro-government militias. Investors will pay close attention, because the chances of a default on foreign debt remain high. —Nathan Crooks

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GLOBAL INTEREST RATES

Estimated yearend central bank rates, from economists surveyed by Bloomberg

China
2015 **4.35%**

Monetary policy will stay loose

2016 **4.20%**

Euro zone
0.05%
0.05%

India
6.75%
6.55%

Japan
0.10%
0.10%

Japan will still be stimulating its economy

Russia
10.50%
7.90%

Russian inflation will abate

U.K.
0.50%
1.10%

U.S.
0.45%
1.25%

The U.S. will raise rates, but they'll still be low by historical standards

REFUGEES Sweden Feels The Strain

The country is taking in more than 400,000 migrants over three years

BY CAROL MATLACK

Sweden, which considers itself a humanitarian superpower, has long welcomed refugees, whether they be Jews escaping the Holocaust or victims of civil wars and natural disasters. Some 16 percent of its population is foreign-born, well above the U.S. figure of 13 percent. Since the 1990s the Scandinavian nation of 9.6 million has absorbed hundreds of thousands of migrants from the former Yugoslavia, the Middle East, and Africa.

Still, Swedes have never experienced anything like the current influx. Some 360,000 refugees—mainly from Afghanistan, Iraq, and Syria—are expected to enter the country in 2015 and 2016, on top of the 75,000 who sought asylum last year. It's as if North Carolina, which has about the same population as Sweden, sprouted a new city the size of Raleigh in three years.

In a sign that its hospitality may be wearing thin, the government announced on Oct. 23 that by next year it will end a policy of automatically granting permanent residency to most refugees. In the future, adults arriving without children will initially get only a temporary residence permit.

The Swedish Migration Agency says that meeting refugees' basic needs could cost the national government 60 billion kronor (\$7 billion) in 2016. Local governments and private organizations will spend billions more. If the flow doesn't subside, "in the long term our system will collapse," said Foreign Affairs Minister Margot Wallström in an Oct. 30 interview with the daily *Dagens Nyheter*.

The scale of the challenge is

clear in Malmö, a city of 307,000 near Sweden's southern tip that's become a main port of entry for refugees who've traveled north through Germany and Denmark. Trains arriving at Malmö's central station in recent weeks disgorge 300 to 400 refugees a day. Red Cross volunteers in bright red vests escort them to a cluster of trailers across the street, where they're offered food, clothing, and other supplies before boarding a bus to a Migration Agency center.

Waiting for the bus on a recent morning with his 6-year-old daughter, Abdul Rahim al Gor says he fled Syria after his hometown near Aleppo was repeatedly bombed. He describes a harrowing boat trip across the Mediterranean, followed by two weeks in a squalid Greek detention center. His eyes, shadowed by fatigue, brighten when he says he'll soon be joined by his wife and four other children. Once he establishes permanent residency, he'll have the right to bring his immediate relatives into the country. "Many of my friends have come here this year already, and they and their families feel secure," he says.

Al Gor and his kin will likely join thousands of asylum seekers being housed temporarily in and around Malmö in school gyms, children's summer camps, and soon a tent city under construction at a nearby military base. The city government is also caring for more than 1,700 unaccompanied refugees younger than 18. "We are

CONT. →

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struggling,” Deputy Mayor Andreas Schönström says.

Finding enough beds and meals is only the beginning. Sweden has had difficulty integrating immigrants, especially those who are low-skilled, into the workforce. The unemployment rate among foreign-born Swedes is higher than 16 percent, vs. less than 6.5 percent for the native-born—one of Europe’s widest disparities. On average, Sweden’s refugees take seven years to become self-supporting. Many never do, says Joakim Ruist, an economist at the University of Gothenburg who studies the impact of immigration. Ruist estimates that support for refugees in recent years has consumed about 1 percent of gross domestic

product—\$5.8 billion annually. He reckons the latest wave could push the cost above 1.35 percent.

In Malmö, a vibrant startup scene is helping to create 10,000 jobs a year. Yet unemployment remains higher than 15 percent, because immigrants from Afghanistan, Somalia, and other countries lack schooling and language skills. Schönström says some commute to low-wage service jobs in Denmark, crossing a 10-mile bridge and tunnel that connects Malmö with Copenhagen.

Few such jobs are available in Sweden. The country has no legal minimum wage, but contracts negotiated between unions and employers guarantee that almost all workers earn more than \$26,000 a year, along with

generous benefits. In a move that could create more opportunities, the government on Oct. 23 proposed expanding tax deductions for people who employ domestic workers such as maids, baby sitters, and gardeners.

Some recent arrivals, especially those from Syria, are educated and may find jobs relatively quickly. Rama Yousef, a university graduate who came in 2013 with her family, spent five months in a government-paid intensive Swedish course, then enrolled in a program at Stockholm University that helps highly qualified immigrants find jobs. She now works in the Stockholm office of consulting group Capgemini. “The Swedish people have done a lot for me,” she says.

END

CITIES

New Town, Old-Timers

In a sign of seniors’ influence, the growth of a retirement complex outpaces that of oil and tech boomtowns **BY BILL FARIES**

“It’s a beautiful day in The Villages, how may I direct your call?” That’s the greeting people get when they make an inquiry at “Florida’s friendliest hometown,” a seniors-only retreat in the heart of the Sunshine State that is, according to the latest Census Bureau figures, the fastest-growing metropolitan area in the U.S.

The 23-year-old development’s 115,000 residents, up from 51,000 in 2010, motor around in customized golf carts that can range from \$8,500 for a standard model to \$30,000 for a souped-up version in the style of a Model T and painted in your college football team’s colors. A performing arts center and more than three dozen free golf courses are among the top draws at this development targeting retirees looking for the “active lifestyle”; its 2,400 clubs are devoted to such pursuits as stamp collecting, tai chi, comic books, and remote-controlled cars. “There is everything here,” says 72-year-old Elaine Dreidame, president of the property owners’ association, who moved to The Villages from Ohio in 1999. “It’s a one-of-a-kind place.”

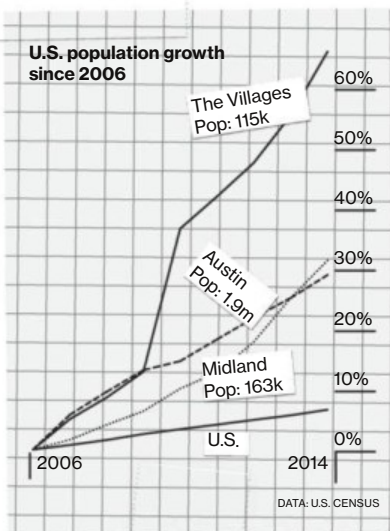
As the development, west of Orlando, continues to sell about 400 homes a month, it’s running low on empty lots, according to sales agent Michael Millhorn.

The Villages is one of the purest indicators demographers have of the rising influence of the elderly. The share of Americans aged 65 and older is forecast to grow to 21.7 percent in 2040, from 14.1 percent in 2013. The median age in Sumter County, where the town’s located, is 62.7, the highest in the U.S., according to the Bureau of Economic and Business Research at the University of Florida.

The second- and third-fastest growing metro areas in the U.S. are Midland and Austin, Texas. Headquarters to the nation’s largest oil region, Midland drew hordes of workers during the shale boom. Now that the oil market has crashed and half the rigs are idled, population growth may stall.

Austin’s population is growing at an annual clip of 13 percent—impressive for a metro area that already approaches 2 million. The increase in tech jobs has outpaced employment in other industries every year since 2010, according to the Federal Reserve Bank of Dallas. One problem that could affect Austin’s growth: It lacks Silicon Valley’s deep pockets to support startups that make it to the next stage of development. —With Dan Murtaugh and Lauren Etter

END



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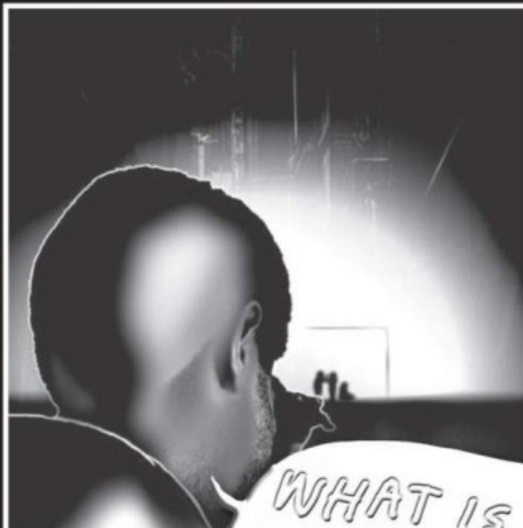
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THE EDITORS RACE THROUGH THE
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WHAT IS
THAT LIGHT?

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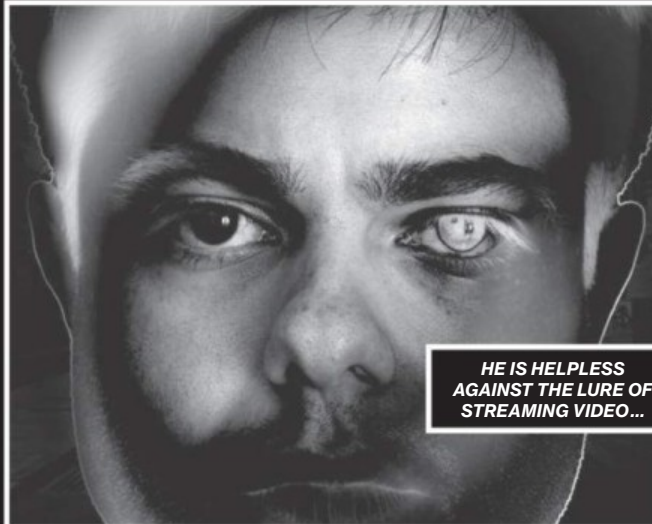


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A FELLOW EDITOR TRIES TO
STOP JEFF FROM LOOKING



NOOOO!!



HE IS HELPLESS
AGAINST THE LURE OF
STREAMING VIDEO...



...AND HIS MIND IS LOST FOREVER



BUT THE TECHNOLOGY SECTION IS SAVED!



Continued on p60

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TECHNOLOGY

EDITED BY JEFF MUSKUS

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VIDEO

The Netflix Effect Is Spreading

Internet video economics will increasingly favor original, higher-value productions **BY JOSHUA BRUSTEIN**



Kathleen Grace has done pretty well for herself in 2015. In June her production company, **New Form Digital**, posted a pilot on **YouTube** for *Single by 30*, a show about two teenagers who promise to marry each other if they wind up unattached at that unfathomable age. When YouTube announced its paid subscription service, YouTube Red, in late October, *Single by 30* was on the list of its 10 exclusive original series and movies. A month earlier, **Verizon** had locked up the rights to six other New Form Digital shows for its Go90 mobile video app, including *#DoOver*, about a woman who has to keep reliving her disastrous 25th-birthday party, and *Mr. Student Body President*, whose teen protagonist is billed as a cross between Ferris Bueller and Frank Underwood. In the past year, Grace has sold 18 shows to 10 digital video services.

The market has grown a lot since Grace began running her production company in the spring of 2014. “At that moment, the market didn’t exist,” she says. Since then, a series of big-name companies such as YouTube and Verizon has been pouring money into digital-video offerings, most trying to differentiate themselves with shows or movies that can’t be found elsewhere. Because many of them are asking customers to pay, rather than have them only watch ads, those companies have to work that much harder to draw in viewers. Digital-video producers, especially those focused on programming for smartphones, are enjoying something they didn’t have a few years ago: a seller’s market.

Call it the **Netflix effect**. The streaming leader’s steady push into original shows and movies has forced rivals such as **Amazon.com** and **Hulu** to do the same. Netflix is running about two dozen original series, including comedies, dramas, and cartoons, and it has slated 30 more for the coming year, plus a steady stream of original documentaries, standup comedy specials, and the occasional feature film. *Transparent* put Amazon on the map. Hulu produced seven half-hour comedy series this year; it’s also ordered dramas, including a mini-series based on Stephen King’s novel *11/22/63*. The new competitors, including YouTube Red and Go90, have learned the lesson. Exclusivity “has worked effectively for Netflix,” says Peter Csathy, the chief executive officer of consultant Manatt Digital Media. “Others are trying to

accomplish that in the long-form and short-form game.”

Snapchat’s videos are a good example of the shorter model. Formatted for viewing on a smartphone, they come from partners such as **BuzzFeed** and **Comedy Central** and prompt viewers to swipe from one brief clip to another unless they opt for a longer segment. (Snapchat recently shuttered a separate effort to produce original material in-house.) Other services are targeting different niches. **Refinery29**’s short videos focus on women; **Vimeo** aims for art-house fare. **Spotify** is developing works that can be played “ambiently”—that is, listened to while your phone’s in your pocket.

YouTube Red’s shows tend to hew more closely to the teen aesthetic of YouTube’s biggest stars. Robert Kyncl, chief business officer, bristles at Netflix comparisons. “Our primary focus of the investment are the people who have risen to fame on YouTube,” he told reporters at the Red launch. “We would very much like that to work, because it would make it very unique. And it addresses the Netflix question, the Hulu question, and any other questions.”

Among the entrants, Verizon appears to be splashing around the most money. It says it’ll have 52 original series on Go90 by the end of the year and has programming deals with about 100 companies. Those include established giants such as **Viacom** and YouTube-grown video networks like **Endemol Beyond**. Adrian Sexton, the chief operating officer and president of Endemol, says agreements with Verizon and other companies provide the capital to boost production quality above what Endemol could afford on old-school YouTube, where ad-sharing deals are profitable only for the most viral of videos. For Verizon, upstarts Endemol and New Form Digital remain a cheaper bet than a studio like **Fox** or **Paramount**, Sexton says. “The production value is in a nice economic sweet spot,” he says. “You’re talking about spending hundreds of thousands, and not millions, on a series.”

This is different from the traditional YouTube model, where creators don’t generally get advances and are paid through a share of the advertising revenue. That model rewards low-budget productions and punishes anyone who can’t attract a massive number of viewers. Subscription services will lead

CONT. →

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to new types of content, says George Strompolos, the founder and CEO of **Fullscreen**, which produces and distributes online video and is launching a subscription service to compete with YouTube Red. "No longer is it strictly this 'build it yourself and get a revenue share' model, although that still exists," he says. "People are buying content in the same way they'd buy a TV show."

There's only so much time in the day, even if people do watch YouTube superstar PewDiePie every minute they're stopped at a red light or in line at the

pharmacy. And not every company that wants its own video service will be able to pull it off. **Microsoft**, **Samsung**, and **Yahoo!** have recently shut down online video efforts. Grace, who worked at YouTube for three years before starting New Form Digital, says she's been successful partly because Silicon Valley's talent for building video services doesn't particularly overlap with the skills needed to create compelling programming. Most companies will likely struggle to do both at once, she says, because "the pieces don't always line up." END

NETWORKS

Cisco Tries to Make a Different Switch

The company isn't letting go of its high-end services, but it's selling more networking equipment with custom software **BY IAN KING**

This year, Chuck Robbins inherited one of the toughest gigs in technology, replacing John Chambers as chief executive officer of **Cisco Systems**. From 2000 to 2010, the networking equipment pioneer averaged 13 percent annual sales growth. Since then, 4.3 percent. Robbins says Cisco has already seen the clouds on the horizon. "You cannot deny what may be

happening in the marketplace because it doesn't feel good for your portfolio," he says.

Cisco's pricey combination of hardware and software is becoming a tougher sell, partly because major data center operators, including **Google**, **Facebook**, and **Amazon.com**, are designing their own stripped-down hardware and writing their own code. In August a

group of Google's hardware boffins said they've been working for a decade to try to replace traditional data center networking equipment. The market for so-called white boxes—meaning generic models—is still a sliver of the networking industry, but it's growing rapidly (page 120). Researcher IDC estimates that annual sales of white-box network switches will rise about 50 percent by yearend, to top \$400 million.

Robbins isn't exactly chucking out Cisco's old product lines, but his sales team is focusing increasingly on the company's white-box-like Nexus switches and more

"80 TO 90 PERCENT OF ENTERPRISES DON'T HAVE THE SKILL SET, THE EXPERTISE"

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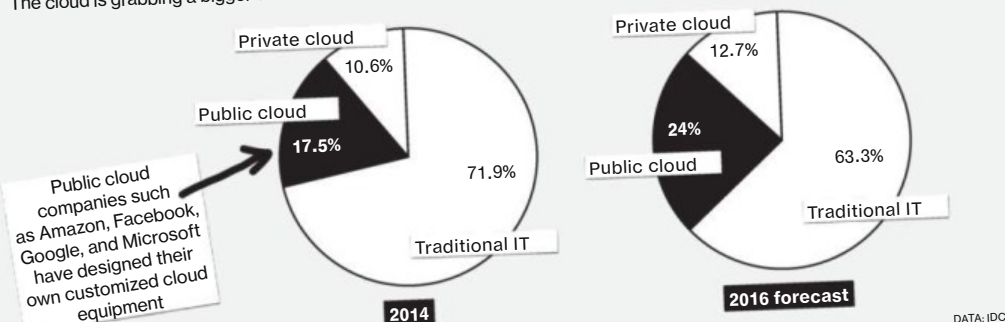
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Global IT Spending Shifts

The cloud is grabbing a bigger share of corporate budgets



"YOU CANNOT DENY WHAT MAY BE HAPPENING IN THE MARKETPLACE"

open management software. That group of products accounted for \$438 million in revenue in Cisco's August earnings report—not a huge chunk of the \$12.8 billion in overall revenue, but more than double the product line's 2014 total.

To appeal to companies looking for more highly customized systems, Cisco has also opened up its software to programmers in new ways, making it easier for clients to write their own apps for Cisco products. Robbins is still betting, though, that most corporate IT departments won't want to bother building their networking components from scratch. Cisco is investing in the development of whiz-bang features such as software that can analyze network traffic in real time to detect cyber attacks. "Eighty to 90 percent of enterprises don't have the skill set, the expertise, and the R&D to

do integration, nor do they want to spend their time figuring out all of this," says IDC analyst Rohit Mehra.

The company's efforts to expand into networking gear that will connect appliances, cars, and lightbulbs have yet to pay off, but Robbins says he's committed to entering those markets. "When you connect 500 billion things, it's going to create a massively distributed technology landscape," he says. Cisco is working with industrial customers such as **Siemens** to embed its gear in network-connected machinery, so the data they collect don't have to be sent across the Internet for analysis. The faster feedback is worth it, says Andre Kindness,

an analyst at Forrester Research.

Some Cisco investors want to see the new products pay off more quickly. "Chuck and the revamped management team bring an interesting perspective, and there's certainly evidence that they want to make change," says Erik Suppiger, an analyst at investment bank JMP Securities. "I would like to see more evidence of them being able to resurrect some growth." IDC's Mehra says the company has three to five years to sell its least tech-savvy clients on either its cheaper hardware or its higher-end software. To sell to sophisticated data center operators, he says, the window is more like two years—"after that, it's too late."

END

JOHN LEGERE CEO, T-Mobile US



CHALLENGE
Retain all the new customers he's won with lower prices

HOT SEAT

Legere's aggressive price cuts and even more aggressive marketing have helped push T-Mobile solidly into third place in the U.S. mobile market (page 128). On Oct. 27 the company reported adding 843,000 retail customers in its latest quarter, bringing its total to 45.7 million. The flip side is that the costs have taken the company's profits below analysts' expectations. The

next challenge for Legere will be to keep the millions of customers he's attracted happy with T-Mobile's relatively spotty network coverage and often limited data speeds. The company's quarterly cancellation rate, or churn, is 1.46 percent, down slightly from the same period a year earlier, but it remains 26 percent higher than AT&T's and 57 percent above Verizon's.



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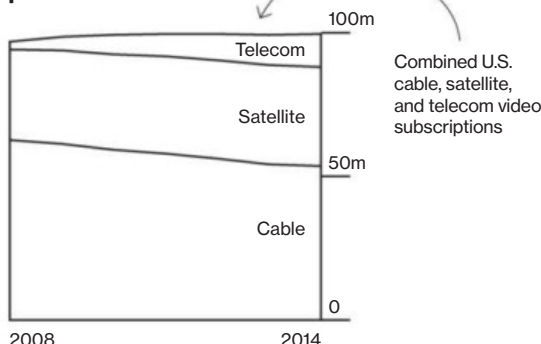
Cutting the Cord, Not the Cost

An ever-longer list of streaming-video services offers smaller pay-TV bundles than traditional providers, but that doesn't mean assembling the package you want is much cheaper

**BY SHAWN HASTO
AND IRA BOUDWAY**

Traditional subscriptions have flatlined, and cable is shrinking

Subscriptions by provider



Partially because the value of a multichannel subscription is less than it appears

An average U.S. subscriber pays

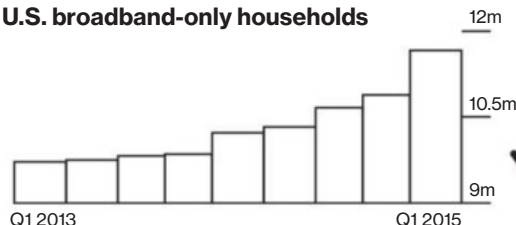
\$95.97

a month and receives
194 channels
but watches only about
17 channels

That's 50¢ a channel and \$5.65 per channel watched

The number of "cord-cutters" is slowly rising

U.S. broadband-only households



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SOFTWARE



Microsoft

Wants to
Be Loved

The company tries to create buzz. It's working **BY DINA BASS**

This year, **Apple** made **Microsoft** look prescient. During its annual product launch-apalooza in September, Apple introduced a larger iPad aimed at business users, one that looked so much like Microsoft's Surface Pro that the online peanut gallery deemed the company a copycat. A few years ago, even if Microsoft had been first on something like that, Apple could well have gotten the credit for the idea. "It's gotten so much better," says Microsoft Chief Marketing Officer Chris Capossela. "The company has so much more momentum."

Capossela is quick to add that Microsoft needs to do more to excite people. "Clearly relevance for consumers" remains a challenge, he says, and next year, Satya Nadella's third as chief executive officer, will show whether the company can get people to love its products, instead of relying on inertia.

**"THIS IS THE
MOST POSITIVE
I'VE BEEN ON
MICROSOFT
IN ABOUT
15 YEARS"**

Already Microsoft is far ahead of where it was when Nadella took over in early 2014, the year after the company wrote down excess Surface tablets and Windows 8 flopped. Since 2013, Microsoft has risen from seventh place to third, behind Apple and **Google**, in BrandZ, the annual consumer survey that researcher Millward Brown conducts for WPP. Marketing consultant CoreBrand says Microsoft rose from twentieth to seventh in its similar survey during that time. The BrandZ report attributes Microsoft's gains to product modernization under Nadella.

In October, Microsoft drew positive reviews for its

first-ever laptop, the Surface Book, with features including a specially designed hinge that lets users adjust the screen angle more radically than most laptops. The Surface Book is sleek and silver, a lot like a MacBook, with specs clearly aimed at Apple customers. (So is the price: It starts at \$1,500.) "It's one of the first high-end Windows devices that may be able to compete with Apple," says Michael Silver, an analyst at researcher Gartner. "It's distinctive. It presents a certain aura that heretofore Apple really owned."

Some of Microsoft's other forays into hardware have been less encouraging. Earlier this year, Nadella wrote down almost the entire \$9.5 billion the company paid for **Nokia**'s cell phone division in 2014 and said he would focus on introducing a handful of phones per year, betting more on mobile software. Microsoft says its Office apps for iOS and Android have been downloaded more than 200 million times since the first one was introduced in March 2014, and the company has acquired makers of e-mail, calendar, and task list apps for iOS and Android to expand its offerings.

Although investors rewarded Microsoft for better-than-expected quarterly earnings in September, its revenue fell \$1.5 billion from the same period a year earlier. Some of that is a one-time hit from the phone division's downsizing, but some of Nadella's strategies to widen Microsoft's consumer audience—free mobile versions of Office apps, free upgrades to Windows 10—also lower or constrain revenue, says Colin Gillis, an analyst at BGC Financial. "He'll have to show that he can also bring in sales," Gillis says.

Microsoft CMO Capossela says that's the next step. Next year will be critical for Windows 10 adoption (page 126), he says, and for building market share for cloud products such as Azure. For now, at least, Daniel Morgan, senior portfolio manager at Synovus Securities, says: "This is the most positive I've been on Microsoft in about 15 years."

END



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DATA MIGRATION

Why the clouds float in clusters

BY DINA BASS AND JACK CLARK

Cloud leaders including **Amazon.com**, **Microsoft**, **Google**, **IBM**, and upstart **DigitalOcean** are spending tens of billions of dollars to construct massive data centers around the world. Microsoft alone puts its total bill at \$15 billion. There are two main reasons for the expansion: First, the companies have to set up more servers near the biggest centers of Internet traffic growth. Second, they increasingly have to wrestle with national data-privacy laws and customer preferences, either by storing data in a user's home country, or, in some cases, avoiding doing just that.

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- AMAZON
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- GOOGLE
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Dallas & Houston: Proximity to Mexico and Central America, plus tax breaks

Iowa: Cheap, abundant wind power and tax breaks

Toronto & Quebec City: Becoming bigger regional hubs

Virginia: The Beltway has massive data needs

Silicon Valley: Everything's super-expensive, but with so many customers here, there's no way around it

São Paulo: High prices for power, but one of the fastest-growing cloud markets—and President Dilma Rousseff has pushed for in-country data security

Sydney & Melbourne: Customers are too far from other data centers and need their information stored nearby

Dublin: A thriving software outpost stimulated by low corporate taxes

London: To accommodate businesses clustered in the financial district

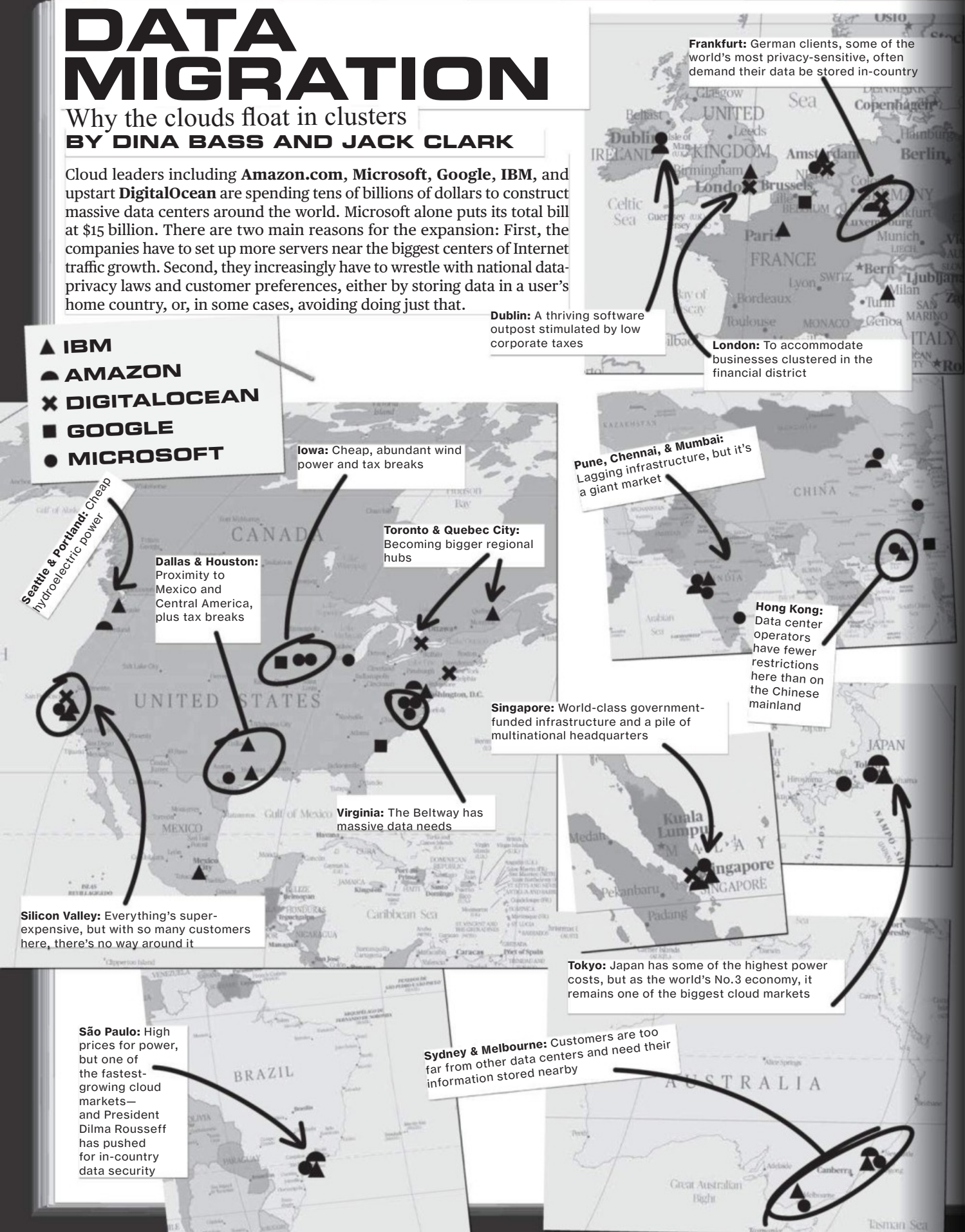
Frankfurt: German clients, some of the world's most privacy-sensitive, often demand their data be stored in-country

Pune, Chennai, & Mumbai: Lagging infrastructure, but it's a giant market

Hong Kong: Data center operators have fewer restrictions here than on the Chinese mainland

Singapore: World-class government-funded infrastructure and a pile of multinational headquarters

Tokyo: Japan has some of the highest power costs, but as the world's No. 3 economy, it remains one of the biggest cloud markets





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HARDWARE

China's Slowdown
Won't Deter Apple

First-time smartphone buyers are on the wane, but the company keeps relying more heavily on Beijing **BY ADAM SATARIANO**

At the Xidan Joycity mall in Beijing in September, 17-year-old student Wu Kai waded through a packed Apple Store to buy iPhones for himself and his girlfriend. He also placed an order for two more for his parents. His family already has just about every other Apple gadget—a Mac desktop and laptop, an iPad mini, and, soon, the new bigger-screen iPad Pro. “Apple products are becoming family members,” he said.

Chinese customers such as Wu have helped Apple largely avoid the decline that's affected its smartphone rivals. The smartphone market there is becoming more like that of the U.S., says IDC analyst Ramon Llamas, with fewer than half of all sales being made by first-time buyers. Industrywide, China's smartphone shipments are on pace to grow about 1 percent this year, after increasing 20 percent last year and 64 percent in 2013, according to IDC. Apple doubled its China sales for the quarter ended in September, to \$12.5 billion, and sold 13 million iPhones during September's launch weekend for the 6S model. That's 3 million more than last year's iPhone 6 debut weekend, when the phone wasn't available in China.

The question is how long Apple can sustain its pace amid China's economic slowdown. Its deal with No. 1 carrier **China Mobile**, which made iPhones an option for its 822 million customers in 2014, has been a big part of Apple's recent success. As carriers including China Mobile cut subsidies for high-end phones, says Llamas, “things will taper off for just about everybody.”

New products such as the Apple Watch haven't become mainstream hits, and iPad sales are stagnating. Apple's stock is down 8.9 percent from an April high amid concerns that Chinese iPhone buyers can't keep the

“THINGS WILL TAPER OFF FOR JUST ABOUT EVERYBODY”

company growing forever (page 119). Channing Smith, managing director at Capital Advisors, which owns Apple stock, says the company may see growth tail off in the short term, but he has faith in services such as Apple TV, Apple Music, and Apple Pay becoming more valuable with time.

Apple has been recruiting more software developers in China, and its app store has more than 250,000 mobile



apps made by local engineers—including games based on traditional Chinese stories—up from about 150,000 last year. The company has added keyboard features that accommodate more Hanzi characters, set up a dedicated marketing department in China, and said it'll increase its number of retail stores in the country from 24 to 40 by the middle of next year.

Chief Executive Officer Tim Cook has gone out of his way to alleviate any concerns about Apple's position in China. In September he met with Chinese President Xi Jinping during Xi's visit to the U.S., sitting with him at the head table during a White House state dinner. In October, Cook tweeted photos from the Great Wall and attended a meeting at a Chinese university where he's a board member. On Apple's Oct. 27 earnings call, he repeatedly emphasized his commitments there. “We've been able to grow without the market growing,” he said. “We're investing in China for the decades ahead.”

END

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SEMICONDUCTORS

The Chips Can't Get Much Smaller

Intel says Moore's Law is slowing, and that could make it tougher for the company to elbow its way into mobile **BY IAN KING**

In May, at a San Francisco talk to mark the 50th anniversary of Moore's Law, **Intel** co-founder Gordon Moore said he was surprised chipmakers have kept it going for so long. Two months later, Intel Chief Executive Officer Brian Krzanich said on an earnings call that the pace is indeed slowing—doubling chip density now takes closer to two and a half years, rather than two.

That trend has huge consequences for the \$300 billion semiconductor industry, as the process that's regularly delivered exponentially better computing power for less money may be approaching its limits. Some of the layers of microscopic circuits etched into materials on disks of silicon measure just a few atoms across, so thin that their conductive properties would break down if they got any thinner. Many circuit lines are narrower than the wavelengths of light used to create them. "At some point the equipment, the technology it takes to make the wafer, gets more expensive," says Dan Hutcheson, head of VLSI Research. "That's when Moore's Law fails."

The cost of keeping pace with Moore's Law is rising,

and fewer companies are willing to pay up. Building a state-of-the-art plant costs as much as \$10 billion, and that plant will be obsolete within five years. Three companies—Intel, **Samsung Electronics**, and **Taiwan Semiconductor Manufacturing (TSMC)**—will account for about half of the \$32 billion in spending on new chip plants and equipment next year, estimates investment adviser Stifel Nicolaus. A decade ago, the top five spenders accounted for 40 percent of the industry's capital expenditures.

For Intel, the industry's high-table stakes have been an advantage, a way to force out those who couldn't spend enough to keep up. The company's remaining rivals haven't seriously challenged its 99.3 percent market share in server processors or its 89 percent of PC chips. But PC shipments are on course to fall below 300 million this year from a 2011 peak of 360 million. The next logical step for giants such as **Facebook**, **Google**, and **Amazon.com** is to consider designing their own chips for their data centers.

Despite more than a decade of trying, Intel has yet to win a significant piece of the mobile market, and the decline of Moore's Law may make it even tougher to break in. TSMC and Samsung have invested heavily in their mobile chip-production facilities to compete for orders from **Apple** and market-leading mobile chip designer **Qualcomm**.

Samsung says it's less worried about Moore's Law. "It is fair to say that semiconductor scaling is becoming more difficult," the company said in an e-mailed statement. "But at Samsung, we are constantly challenging the limits of what was once considered impossible." TSMC didn't respond to requests for comment.

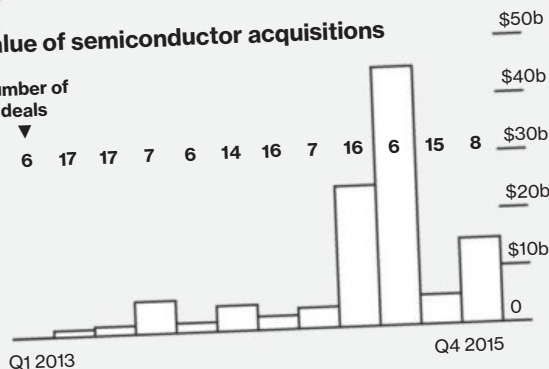
Intel's Krzanich, when asked during the earnings call what his prediction of a tempered Moore's Law meant for his company's competitive position, said the true measure of success will remain output. "We're talking about millions of units and large volumes," he said.

"Intel has been positively unstoppable" as a leader in chip-production technology, James Hamilton, the chief architect of Amazon's cloud services hardware, wrote in an Oct. 11 blog post. Ultimately, though, a slowing of Moore's Law could give TSMC and Samsung more time to catch their mobile chips up to Intel's PC and server models. "There is definitely a narrowing of the gap," says Jim McGregor, head of advisory firm Tirias Research. "Samsung and TSMC can get there. They have the industry support and investment."

MICROCHIPS, MEGADEALS

Value of semiconductor acquisitions

Number of deals



Acquisitions on the rise

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Intel	\$14.4B	Altera

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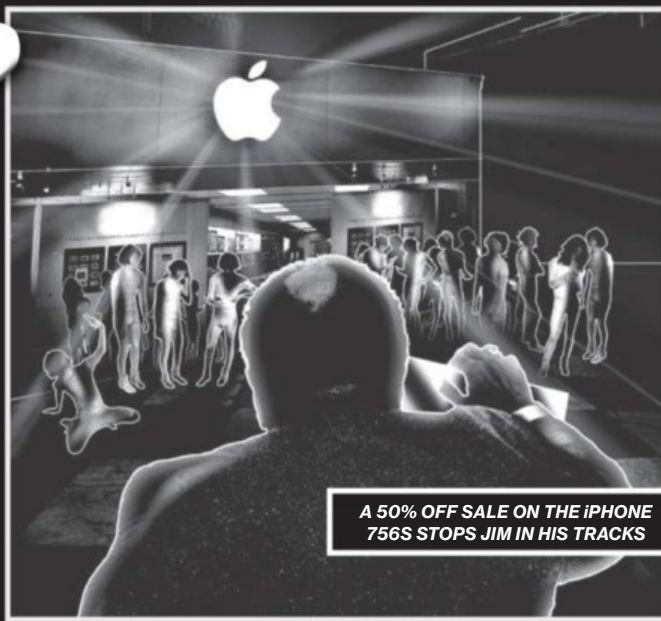
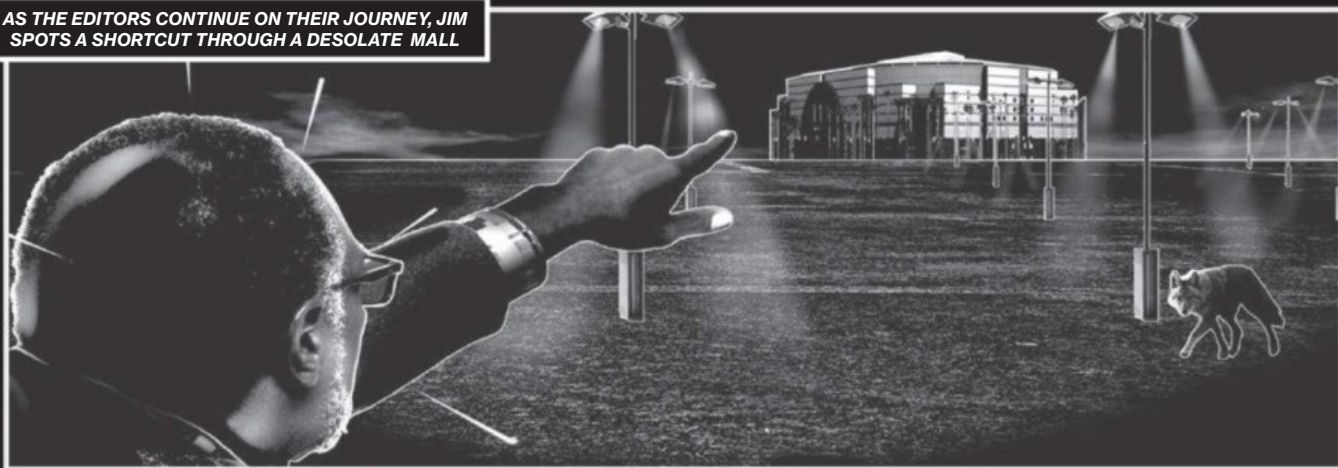
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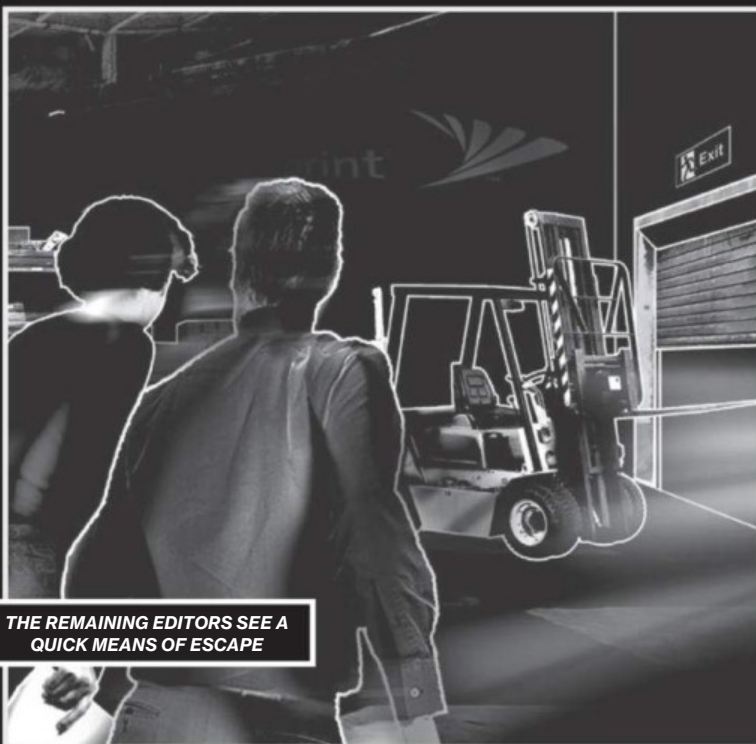

CATHAY PACIFIC
Life Well Travelled

AS THE EDITORS CONTINUE ON THEIR JOURNEY, JIM SPOTS A SHORTCUT THROUGH A DESOLATE MALL



THE SIREN SONG OF DISCOUNT ELECTRONICS PUTS JIM IN A DAZE. CRISTINA GRABS THE RETAIL SECTION...





RETAIL

EDITED BY JAMES E. ELLIS AND DIMITRA KESSENIDES

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FOOD

Slapping a 'Natural' Label On Everything

Brands are wooing consumers by pitching products as wholesome or authentic. Often, though, that's a matter of opinion **BY ANDREW MARTIN**

Log Cabin All Natural Table Syrup has no artificial flavors or colors, nor does it contain preservatives or high-fructose corn syrup. It's sold in a traditional jug similar to those used by many Vermont maple sugar makers, complete with a picture of a snow-covered log cabin on the label evoking the woods of the Green Mountain State.

But while Log Cabin All Natural Table Syrup may indeed be "natural" and "authentic," as the jug suggests, it isn't maple syrup, despite the best efforts of its marketers to suggest otherwise. (The top ingredients are brown rice syrup, water, and sugar.)

It's just one example of a marketing trend that's quickly transforming the nation's grocery aisles. Consumers are clamoring for food that's simple, less processed, and genuine. Companies are rushing to oblige

them by reformulating products or labeling them in a way that evokes verdant farmland and authenticity.

In one telling sign that the trend could reach even the most unlikely comestible, **Kraft** Macaroni & Cheese—that electric-orange staple of the American kitchen—will be reformulated early next year to eliminate artificial preservatives and synthetic colors.

Consumers trying to sort legitimate claims from marketing baloney will continue to have their work cut out for them in 2016. There are stringent rules for organic food, which must be grown and

"gluten-free," but not "natural." Terms such as "local," "humanely raised," and "authentic" are largely left to the interpretation of food marketers. Plaintiffs' lawyers have stepped into the void, filing hundreds of lawsuits against food manufacturers for allegedly misleading consumers with labels, particularly in their use of the term "natural."

"I don't think the current situation is in the public interest, since it's so difficult to know whether the labels really mean better production practices or are just there for marketing," says Marion Nestle, a professor of nutrition at New York University. "Caveat emptor."

Urvashi Rangan, executive director of *Consumer Reports'* food safety and sustainability center, says its surveys have found that typical consumers believe natural is comparable to organic, though the latter is defined by hundreds of pages of regulation.

"Organic is being cheated because people are looking to natural to deliver the same thing," she says, adding that *Consumer Reports* is pushing for a ban on "natural" marketing on food. "There is more wrong with the natural label than what is right with it. Manufacturers can literally decide what they want it to mean."

While sales of foods labeled organic and natural have been growing steadily for years, the latest demand is led by younger shoppers obsessed with where their food comes from and how it's made. Their logic isn't exactly rooted in science. Instead, says Laurie Demeritt, chief executive officer of market researcher Hartman Group, "healthy" has been redefined by consumers as "more real, less processed, and less bad stuff in it." Under that mindset, consumers are pushing back on food products with added vitamins and minerals because they're perceived as more processed and less authentic, she says.

Oversight of food labels in the U.S. is divided between the Department of Agriculture, which oversees meat, poultry, and processed egg products, and the FDA, which oversees shell eggs and most everything else. The Agriculture Department requires prior approval of labels; the FDA doesn't, and it "generally approaches this issue from a food safety perspective," a spokeswoman says. Both agencies require that marketing claims be truthful and not misleading.

The FDA is revising the nutrition facts panel required on the side of packaged foods and is considering creating a uniform system to provide consumers with information on the nutritional value of different items. Similar grading systems offered by retailers and food companies have previously been criticized for designating



processed without antibiotics or synthetic hormones, pesticides or fertilizer, and avoid artificial colors, dyes, and preservatives, too. But many food labels are loosely regulated by the federal government, which has provided a patchwork of guidance on food marketing terms.

The U.S. Food and Drug Administration has defined

Cont. →

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products such as **Kellogg's** Froot Loops as a healthier food choice.

Beyond that, consumers are left to figure out for themselves whether natural, free-range chicken is worth the extra money. (The USDA says natural chicken must contain no artificial ingredients or added color and be minimally processed, and free-range poultry must have access to the outdoors, though how much isn't defined.)

Phil Lempert, editor of SupermarketGuru.com, says he advises consumers to ignore the marketing claims and look instead at the ingredient list and nutrition facts panel on a food's packaging. "Going into a produce department and seeing gluten-free stickers on apples is ludicrous," says Lempert, who observed such promotion at a local grocery. "It just becomes overwhelming to an average consumer."

A growing number of food marketers seem to take the approach that more labels are better—even if they're sometimes meaningless or redundant. Carol's Cage Free Heirloom Brown Eggs, for instance, are certified humane and contain no antibiotics or hormones. But every egg brand could make that last claim, since the federal government doesn't allow hormones to be used on poultry. A Carol's spokesman says the company includes the label because many consumers believe hens are given hormones to produce more eggs.

Twizzlers, the twisted licorice candy produced by **Hershey**, are billed as a "low-fat snack," a claim that Neil Stern, a senior partner at McMillan Doolittle, a retail consulting firm, calls ludicrous. "That's because it's 100 percent sugar!" he grouches. A Hershey spokesman says the label on Twizzlers, which are made from corn syrup, is useful to consumers seeking low-fat snacks.

Sometimes figuring out all the hype doesn't seem possible, even for the pros. The packaging for **Post Foods'** Great Grains Digestive Blend cereal trumpeted that the breakfast flakes support healthy digestion and include a "berry medley" with "natural flavor with other natural flavor." But when asked to explain the latter claim, a Post spokeswoman said only that the product is being discontinued.

Few companies have embraced the labeling craze with as much enthusiasm as Annie's Homegrown, based in Berkeley, Calif. Although it sells a variety of products, Annie's, which **General Mills** bought in 2014, is perhaps best known for its macaroni and cheese. Its success may explain why Kraft is

reformulating its own iconic product.

Some boxes of Annie's mac and cheese have so many claims emblazoned on them—no artificial flavors, synthetic colors, preservatives, or GMOs—that there's scarcely any remaining real estate. The company did find room to squeeze in a mention that the box is made from "100 percent recycled paperboard."

Annie's offers a wide range of mac and cheese choices, including ones billed as organic, natural, and made with whole grains. In 2014 the company introduced mac and cheese made with cheese sourced from grass-fed cows, and a few months ago it rolled out organic vegan and organic vegan gluten-free offerings. "We try to call out things we think are important to them," says John Foraker, Annie's CEO, who says the box has always been his company's primary marketing platform. "We would rather overcommunicate than undercommunicate." Given the brand's success, consumers are likely to see a lot more overcommunication on their grocery shelves in 2016.



END

GREG CREED

CEO, YUM! BRANDS



CHALLENGE

Reinvigorate long-neglected U.S. chains

HOT SEAT

Yum, parent of Taco Bell, KFC, and Pizza Hut, will spin off its troubled China operations into a separate public company in 2016. That would seem to remove one of Chief Executive Officer Greg Creed's biggest headaches. The China unit's travails have dragged down the parent's results, attracting activist investor Keith Meister, a vocal proponent of the spinoff who recently joined Yum's board. Yet

without China, which yielded 70 percent of companywide profits in 2014, Creed will have to revive two flagging U.S. operations. Pizza Hut sales fell 3.5 percent in 2014 as it lost share to Domino's and Papa John's. KFC posted flat sales last year, while rivals Chick-fil-A and Popeyes saw gains of 14 percent and 12 percent, respectively. Creed isn't the only Yum exec feeling the heat....

MICKY PANT

CEO, YUM! RESTAURANTS CHINA



CHALLENGE

Cope with slowing demand

HOTTER SEAT

... In August, Micky Pant took the helm of Yum's business in China, where sales have been hammered by increased local competition and the fallout from a 2014 scandal involving a supplier accused of selling expired meat—a hot-button safety issue on the mainland. Previously, Pant ran KFC, helping expand its footprint in Asia. From the moment he assumes the post of CEO

of newly independent Yum Restaurants China, by the end of next year, Pant will be under increased pressure to jump-start sales at the Yum restaurants his company will operate as an independent franchisee in the country. That could be tough: analysts question whether Chinese consumers will continue to have a big appetite for Western fast food. —Craig Giammona

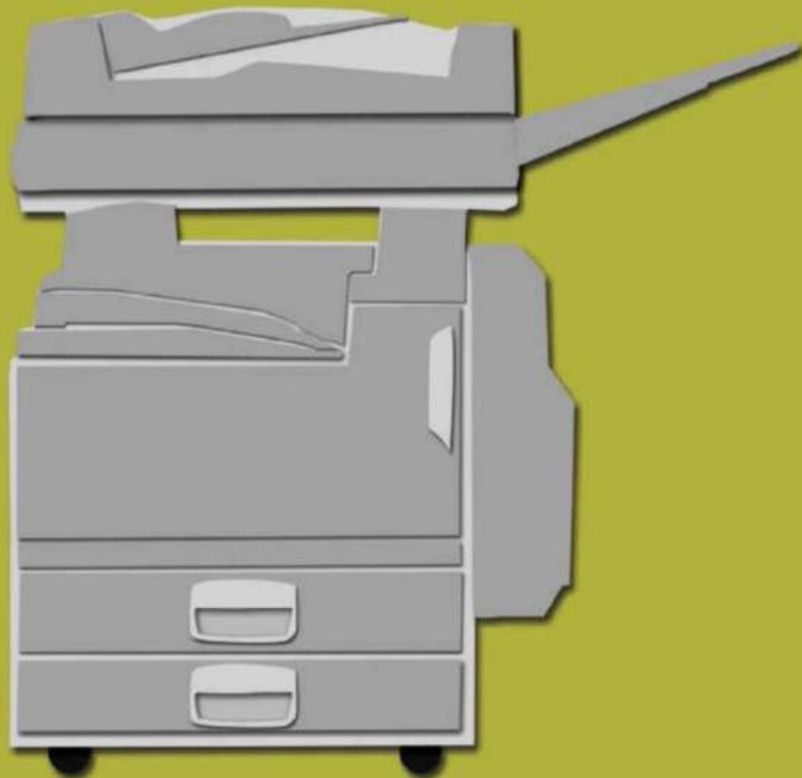
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CARS

Overcapacity Is China's New Normal

Growth in demand for cars has slowed, and some manufacturers are selling only half the vehicles they can build

For much of the past decade, China's auto industry seemed to be a perpetual growth machine. Annual vehicle sales on the mainland surged to 23 million units in 2014 from about 5 million in 2004. That provided a welcome bounce to Western carmakers such as **Volkswagen** and **General Motors** and fueled the rapid expansion of locally based manufacturers including **BYD** and **Great Wall Motor**. Best of all, those new Chinese buyers weren't as price-sensitive as those in many mature markets, allowing fat profit margins along with the fast growth.

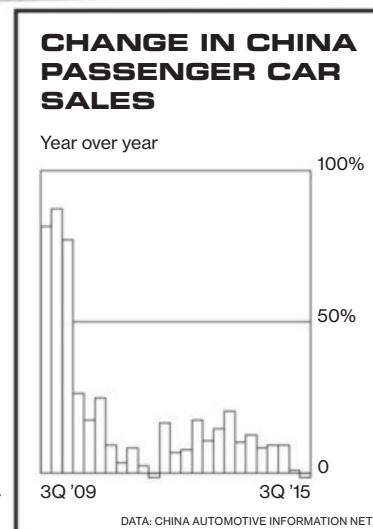
No more. Automakers in China have gone from adding extra factory shifts six years ago to running some plants at half-pace today—even as they continue to spend billions of dollars to bring online even more plants that were started during the good times. The construction spree has added about 17 million units of annual production capacity since 2009, compared with an increase of 10.6 million units in annual sales, according to estimates by Bloomberg Intelligence. New Chinese factories are forecast to add a further 10 percent in capacity in 2016—despite projections that sales will continue to be challenged.

"The Chinese market is hypercompetitive, so many automakers are afraid of losing market share," says Steve Man, a Hong Kong-based analyst with Bloomberg Intelligence. "The players tend to build more capacity in hopes of maintaining, or hopefully, gain market share. Overcapacity is here to stay."



The carmaking binge in China has its roots in the aftermath of the global financial crisis, when China unleashed a stimulus program that bolstered auto sales. That provided a lifeline for U.S. and European carmakers, then struggling with a collapse in consumer demand in their home markets. Passenger vehicle sales in China increased 53 percent in 2009 and 33 percent in 2010 after the stimulus policy was put in place. But the flood of cars led to worsening traffic gridlock and air pollution that triggered restrictions on vehicle registrations in major cities including Beijing and Shanghai.

Worse, the combination of too many new factories and slowing demand has dragged down the industry's average plant



utilization rate, a measure of profitability and efficiency. The industrywide average plunged from more than 100 percent six years ago (the result of adding work hours or shifts) to about 70 percent today, leaving it below the 80 percent level generally considered healthy. Some local carmakers are averaging about 50 percent utilization, according to the China Passenger Car Association.

Excess capacity is raising the pressure on carmakers to step up margin-destroying discounts to goose sales and keep production lines busy, according to Boston Consulting Group. The markdowns can be huge. Motorists can buy an iEV4 car made by **Anhui Jianghuai Automobile** for 61,100 yuan (\$9,642), 60 percent off its sticker price, according to Autohome, a popular car pricing portal in China. Western models aren't immune to the price



slashing. The offering price of Audi's A1 is being cut by up to 35 percent, to 194,900 yuan, in some Chinese cities, according to Autohome. And with capacity growth expected to continue outpacing demand, the industry's return on invested capital in China will decline from 19.1 percent in 2014 to 10.5 percent by 2018, Sanford C. Bernstein estimates.

That's a far cry from the halcyon days of carmakers on the mainland. In 2010 the gross profit margin of **SAIC Motor**, which manufactures through joint ventures with Volkswagen and GM, stood at 20 percent. At the time, if consumers didn't want to wait months to get their Tiguan SUV made by SAIC-VW, they needed to pay 30,000 yuan more, or 15 percent above the

AUDI'S A1 IS SELLING FOR 35 PERCENT OFF STICKER PRICE IN SOME CITIES

sticker price. Today discounts on some Tiguan models approach 19 percent, and according to data compiled by Bloomberg, SAIC's estimated gross margin for this year will slip to 11.9 percent.

Carmakers recently got help when China's government, prompted by the sharp slowdown in auto sales in this year's first three quarters, announced a tax cut on vehicle purchases from Oct. 1 through the end of 2016. China's purchase tax on vehicles with efficient



CONT. →

engines 1.6 liters or smaller has been cut in half, to 5 percent. Buyers have responded, with retail auto sales in the first three weeks after the tax cut rising 11 percent from the same period last year, according to the China Passenger Car Association.

The tax break could postpone the day of reckoning for the industry, especially for smaller manufacturers of cheaper models. But analysts worry that even if small or weak players survive, they won't make enough money to support the investments needed to meet stricter safety and emission standards that China has scheduled for the next few years. The government is requiring auto makers to lower the average fuel consumption of their vehicles to 5 liters per 100 kilometers (1.3 gallons per 62 miles) by 2020, from the current 6.9l/100km. Companies have been developing electric vehicles or adding complex fuel-saving features to meet the tougher standard. But all that takes technical expertise and money—things foreign joint ventures have, but that many small domestic carmakers don't.

Before the tax cut, China's auto regulators had repeatedly urged smaller auto companies to merge or be acquired as part of a strategy to pool resources and nurture a handful of manufacturers that can compete internationally. "The tax cut delays the process of eliminating outdated extra production capacity and clouds the judgment of automakers of the market and capacity expansion," says Xu Gang, a managing director at Boston Consulting Group in Beijing. "Instead of trying their best to become more competitive, some local carmakers are getting used to the idea that the government will help them out when the going gets tough."

Whatever the long-term consequences, Tony Yang, a car salesman in Beijing for **Haima Automobile Group**, is relieved to catch a break after a lean spell. This year has been the roughest in his three years in sales because "people don't recognize our brand," he says. Haima sold a total of 180,870 vehicles last year—less than 5 percent of market leader Volkswagen's sales. "It's been difficult to sell cars in this climate," he says. "The tax cut helped. I sold four in the past 20 days. I just hope there are more stimulus policies coming."

Even big auto makers are tapping the brakes. **BMW** says it cut production in China in the first seven months of the year by 16,000 vehicles. And **Toyota Motor**, despite seeing an 11.5 percent increase in China sales in the first nine months of 2015, is treading carefully. It's scheduled to begin production of an assembly line in Tianjin by mid-



2018, which will allow it to make an additional 100,000 vehicles a year. But Toyota says that output will be mostly offset by ending production on an existing assembly line elsewhere on the mainland. That kind of caution is fast becoming the new normal for carmakers in China. —*Bloomberg News*

END

FASHION

New Customers Push Retailers To Rethink Plus

Young, stylish shoppers looking for bigger sizes represent a chance to boost sales **BY LINDSEY RUPP**

For as long as there's been plus-size women's clothing, there's been a plus-size stigma attached to it. Retailers hide the clothes, sizes 14 and up, in the basements of their stores, far away from the rest of womenswear. The tops, pants, and dresses are big and boxy, typically concealing a woman's shape.

The message isn't only about hiding your curves. It also says, as the actress Melissa McCarthy told fashion site Refinery29, "You're not really worthy."

\$50%

Share of U.S. female shoppers buying plus sizes



McCarthy

Spurred by online retailers, social media, and celebrities like McCarthy, larger sizes are gaining acceptance and visibility. Established companies from **Target** to teen chain **Charlotte Russe** introduced plus-size collections this year. New labels like e-commerce brand **Universal Standard** are updating larger-size looks. The company's first eight-piece collection of minimal designs went on sale in September. The momentum, says Marshal Cohen, a retail analyst with research firm NPD Group, will pick up next year. "Some retailers are going to make a big deal of plus size in 2016," he says.

McCarthy has been a force pulling the \$19.9 billion market for plus-size clothing in the U.S. into the mainstream. After several designers refused to make her a dress for the 2012 Academy Awards, she created her own line, **Melissa McCarthy Seven7**. Introduced in August, the clothing comes in sizes 4 to 28 and sells on Home Shopping Network. **Nordstrom** and **Macy's** (page 125) stock only the plus sizes of her line. McCarthy is pitching the stores to

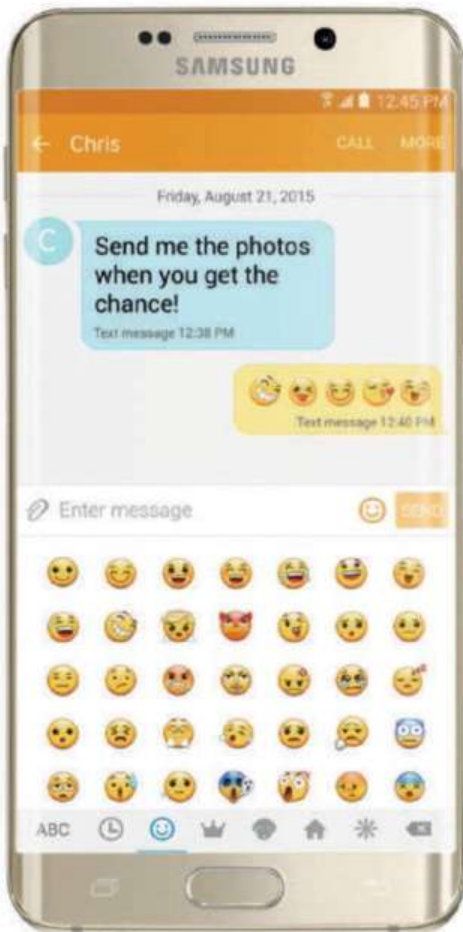


From the Seven7 collection

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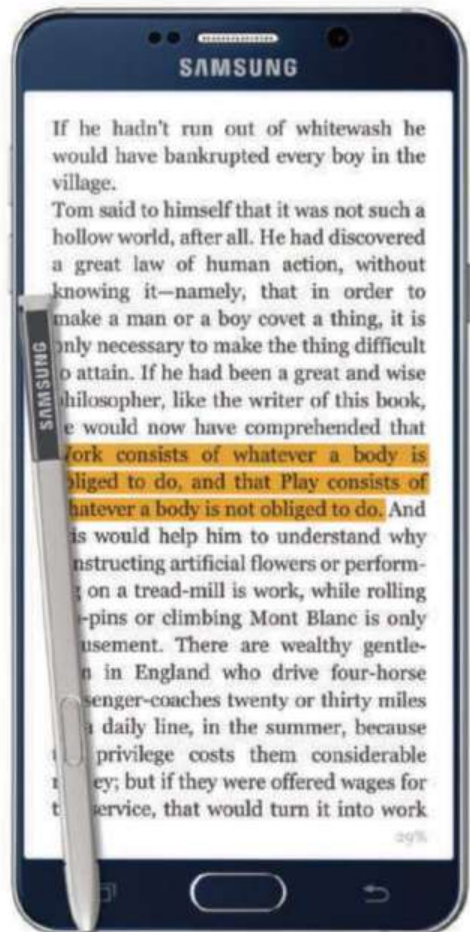
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take the full collection and display all sizes together.

Rebel Wilson also has been outspoken about a fashion industry that hasn't always catered to her shape. In November the actress added her name to a line of clothes from **Torrid**, a women's and teen plus-size chain with stores across the U.S.

That growing visibility isn't only in stores. Bloggers and news sites such as Refinery29 are covering larger-size clothing along with other fashion trends. "Look at social media, look at movies, TV, music," says the designer Rachel Roy, who's preparing a "curvy" collection that will go on sale early next year. "The difference is that people are starting to actually pay attention to it, talk about it, and act on it now."

With 65 percent of female shoppers buying plus sizes, major stores can't ignore the market. "As retailers are looking for growth, they'd be hard-pressed not to consider this customer," says Mariah Chase, chief executive officer of **Eloquii**, an online fast-fashion retailer of plus clothing. Eloquii was started by the Limited in 2011, closed in 2013, and revived by employees and investor John Auerbach last year as an independent company. Its sales tripled in its first year, Chase says, and are projected to top \$20 million this year. "There's buying power," she says.

Lane Bryant, the national plus-size chain owned by Ascena Retail Group and a mainstay in the market, has seen sales rise over the last three fiscal years. The brand accounted for 25 percent of the parent company's revenue last quarter. Sales at Lane Bryant stores and online rose 3 percent in the fourth quarter from a year earlier. The brand attributes the growth to new ads tackling stereotypes in the fashion industry. One video, featured on Lane Bryant's social media pages, shows plus-size models

"THIS IS A MARKET THAT WAS REALLY NOT TAKEN CARE OF. THERE WAS NO LOVE"

in their underwear striking sexy poses and saying, "No one's ignoring us anymore," as #PlusEqual flashes on the screen.

For brick-and-mortar retailers, limited floor space has dictated whether they carry such lines. Plus sizes historically have been one of the first to go when another product, such as handbags, starts driving sales. "This is a market that was really not taken care of. There was no love," says Gerard Guez, CEO of **Sunrise Brands**, which manufactures McCarthy's line. But today's plus-size customer is different and demanding that retailers pay attention, he says. And she's doing a lot of shopping on the Internet. "The biggest opportunity is online," where retailers can and do carry more merchandise, says Kathy Bradley-Riley, senior vice president for merchandising at retail and fashion advisory firm Doneger Group. Says Guez: "There's certainly a market that's just waking up, and instead of telling people to lose weight, the message is love yourself the way you are."

Universal Standard



END

YOUR ONE-TAP FUTURE

How mobile buying went from many screens to one
BY LAUREN COLEMAN-LOCHNER
AND LINDSEY RUPP



2012 DESKTOP TO MOBILE

Consumers turn to apps, social media, and mobile-optimized websites to browse through and buy products on their phones—clicking through five screens to pay.

2014 MOBILE REVOLUTION

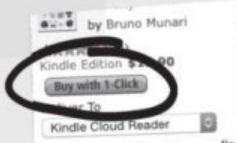
In October, Apple introduces Apple Pay, which simplifies checkout by using shoppers' saved information and eases security concerns because it doesn't store card numbers on Apple phones or servers.

2015 SHOPPING APPS

Mobile sales jump to 15 percent of digital sales after sitting at 11 percent for years, according to analytics company ComScore. Established fashion brands such as Cole Haan roll out one-click-enabled shopping apps.

2016 BUYING MORE, BROWSING LESS

Mobile commerce is expected to jump 23 percent, to \$142 billion, according to Sucharita Mulpuru of Forrester Research. The bulk of growth will be driven by one-click-enabled apps, according to PredictSpring's Mangtani.



One-click checkout has been around since 1997, when Amazon.com introduced it for desktop users.



So-called digital wallets such as Apple Pay will account for the majority of mobile transactions by 2017, according to Nitin Mangtani, CEO of PredictSpring, a digital commerce company.

"The bigger the phone screen size is, the more people spend," says Andrew Lipsman, ComScore vice president for marketing and insight. Bigger phone screens make it easier to see products and navigate apps and mobile sites.

"From a consumer and a retailer standpoint, the smartphone is top-of-mind," says Michael Jones, an executive at RetailMeNot, a digital discount site.



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VIP LOUNGE

Macau's so-called VIP Chinese gamblers, who once spent up to \$10 million per visit, are vanishing because of closer mainland oversight. VIPs' share of total gambling fell to 53 percent in the third quarter, from 65 percent two years ago. Today high rollers typically drop just \$1 million to \$5 million a visit.

Hong Kong tycoon
Lui Che-woo's **Galaxy
Entertainment**

Group has two Macau casinos that together generated more gambling revenue than the entire Las Vegas Strip last year. In May he added a Broadway-themed property, and he has big plans for his land on the Cotai Strip, which is turning into a Vegas-style play land.

Steve Wynn's
Wynn Resorts gets 60 percent of its revenue from Macau. It will open a \$4.1 billion resort there next year. Wynn grouches the government has yet to say how many tables he can operate.

Billionaire Pansy Ho, one of Stanley Ho's 17 children, owns 27 percent of **MGM Resorts International's** Macau unit. It operates a single property, but in 2016 will open a \$3 billion gaming resort on the Cotai Strip that will nearly triple MGM China's room count.

Casino tycoon Stanley Ho had a four-decade monopoly on gaming in Macau until China in 2001 opened the market to other operators. (There are now six.) Ho's **SJM Holdings** still owns 20 of the city's 36 casinos and is building a Versailles-style resort with luxe hotels designed by Versace and Karl Lagerfeld.

Mariah Carey reportedly got a six-figure sum to sing at the Oct. 27 debut of Melco Crown's Studio City casino, which is using A-list talent to create buzz. Madonna will perform there in February.

Brad Pitt and Leonardo DiCaprio were among the stars in a Martin Scorsese-directed 16-minute promotional film for Studio City's opening. Its cost: more than \$70 million.

me To
BAU

Chinese President Xi Jinping has ordered Macau to diversify beyond gambling. So casino operators are adding hotels, restaurants, theaters, and glitzy malls to lure tourists.

Junket operators—middlemen who provide the gambling credit high rollers use in Macau—offer free rooms, luxury goods, and trips on private jets as perks.

80%

Share of Macau government revenue that comes from gambling

\$44B

Macau's total gaming revenue in 2014—seven times the take for the Las Vegas Strip. Analysts expect revenue to fall 32 percent in 2015 as many wealthy clients lie low.

\$110B

Drop in market value of the stocks of Macau's six casino operators since the industry's 2013 peak

U.S. conservative political donor Sheldon Adelson gets about 60 percent of revenue for his **Las Vegas Sands** from Macau. In 2016 he'll open the \$2.7 billion Parisian resort, featuring a half-size replica of the Eiffel Tower.

Lawrence Ho (another of Stanley's kids) and Australian casino baron James Packer control **Melco Crown** (page 126), which opened the \$3.2 billion Studio City resort in October. It promotes family entertainment, including a 4D Batman Dark Flight ride (the seats move, too) and Asia's highest Ferris wheel.

China's found an effective way to get casinos to expand beyond VIP gamblers: limiting their gaming tables. Melco Crown's Studio City asked for 400; it got 250. So operators have an incentive to build more nongaming amenities.

Macau long offered only smoky, bare-bones casinos for hard-core gamblers. But Melco's new Studio City boasts an indoor playground for kids.

GAMING

Macau Throws the Dice

Macau's casino operators are putting \$28 billion in investments into huge gaming resorts from 2015 through 2018. They're betting they'll lure more mass-market gamblers to help make up for the high rollers the city's lost to China's anticorruption push and slowing economy **BY STEPHANIE WONG**

ENTERTAINMENT

Virtual Reality Goes to The Movies

Hollywood studios will tiptoe into content for VR headsets in 2016. At \$100 million for a blockbuster movie, who can blame them?

BY LUCAS SHAW

Ever since **Facebook** paid \$2 billion for virtual-reality startup Oculus last year, technophiles have debated the relative merits of the VR gear that will be available in 2016 from the Facebook unit (the Rift headset), **Samsung** (Gear VR, which works with a smartphone), and **Google** (Cardboard). Yet success for the new medium may hinge on something far more conventional: the content that will be watched on the devices.

As the video game industry learned long ago, buzz around a Mario Bros. or



\$1,500

↑
OCULUS RIFT

Halo title can speed a tech product's adoption. Video games will spur early sales of the Rift, Oculus says, but mass adoption of the technology may depend on Hollywood. "Over the next year, you'll see something come along that defines storytelling in virtual reality," says Robert Stromberg, co-founder and chief creative officer of **Virtual Reality Co.** "I have enough years under my belt in visual effects and filmmaking that I see a new medium being born."

A VR experience drops viewers into the middle of the world of the film. Rather than watching from afar, you feel like a character who can interact with everyone around you.

Stromberg, who won Oscars

for Best Art Direction for both *Avatar* and *Alice in Wonderland*, recently worked with director Ridley Scott to craft a VR experience set in the world of his movie *The Martian*. The project, which

places viewers in the environment of the film but isn't part of the movie, will be released for headsets next year. Stromberg's company is also working on an untitled virtual-reality project with Steven Spielberg.

Hollywood studios are kicking VR's tires in hopes that its appeal could someday rival that of 3D or IMAX. **Lions Gate Entertainment** and **21st Century Fox** have agreed to sell movies via Oculus's online store, and **Netflix** will make its streaming service available on VR headsets. Oculus plans to unveil similar deals closer to the early-2016 Rift launch, according to Chief Executive Officer Brendan Iribe.

Those deals cover traditional 2D movies and TV shows that can be viewed wearing a headset. Despite the enveloping experience, it's not much different than watching on an ordinary television. Studios' next step is producing or funding cinematic VR—truly immersive, interactive, short-form virtual reality designed specifically for the medium.

A VR experience can cost from \$250,000 to seven figures to produce, but last just a few minutes. A complete blockbuster film could cost \$100 million—an amount no studio would probably commit until there's a proven audience and business model for the technology.

For now, Hollywood is experimenting. Along with its project for *The Martian*, Fox has commissioned a VR package tied to its movie *Wild*. While the *Wild* project is limited to

three degrees of motion (viewers can move up and down, left or right, or tilt forward or back), the *Martian* experience allows for parallax—six degrees of motion—more like the real world. Users could also affect the virtual environment, standing in the shoes of Mark Watney, the character played by Matt Damon.

The studio will sell the 15- to 20-minute VR tie-in in time for the Rift's debut. Fox has yet to set an amount, but it will be "accessibly priced," says Mike Dunn, president of 20th Century Fox Home Entertainment. (Analysts predict VR content will initially be priced higher than MP3s, but well below video games, which offer far more playtime.) For Fox, VR is not a gimmick or marketing addendum to a film, but the studio's No. 1 priority in home entertainment, Dunn says. **Walt Disney's** Industrial Light & Magic is also working on a VR tie-in for its *Star Wars* update.

"We're in conversations with all the studios about creating content, and the first question, whether it's an executive, producer, movie star, or director, is: 'What are the eyeballs?'" says Bryan Besser, an agent at **Verve Talent & Literary Agency** who represents VR filmmakers, including Felix Lajeunesse and Paul Raphaël. Oculus has commissioned the pair to produce original series for the Rift. And the duo's VR videos include a five-part series with LeBron James as he prepares for the basketball season and a video of a trip to Africa by Bill Clinton, where viewers "sit" in the room as he talks with poor families. "The holy grail—what everyone is about—is original, nonbranded content," Besser says. "Everybody wants it, but nobody wants to pay for it." —With Anousha Sakoui





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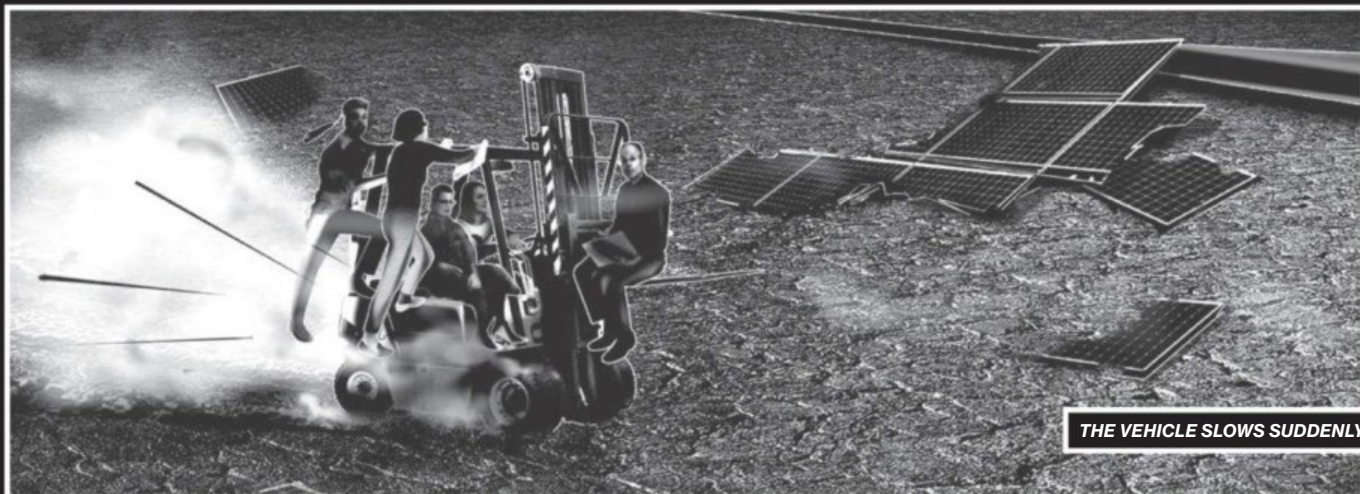
THE EDITORS DRIVE THROUGH A DESERT
THAT ONCE HELD THE PROMISE OF
CLEAN, RENEWABLE ENERGY



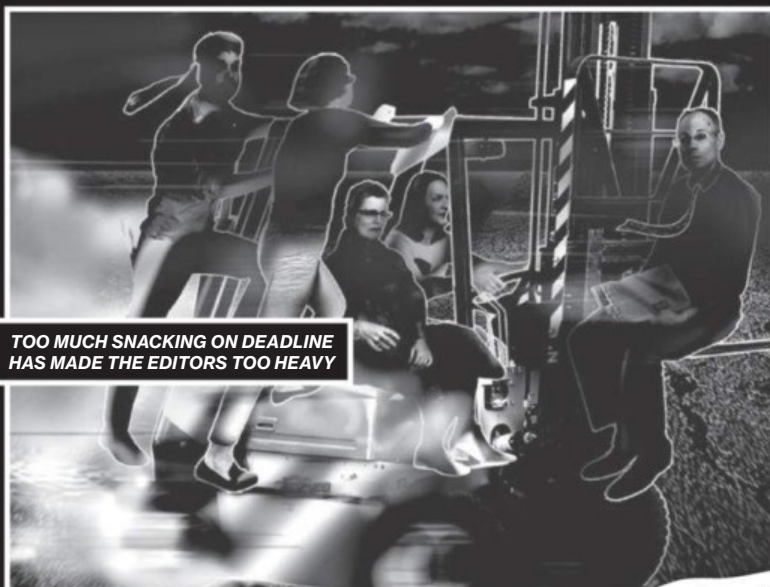
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THEY MAKE THEIR WAY THROUGH
FALLEN WINDMILLS

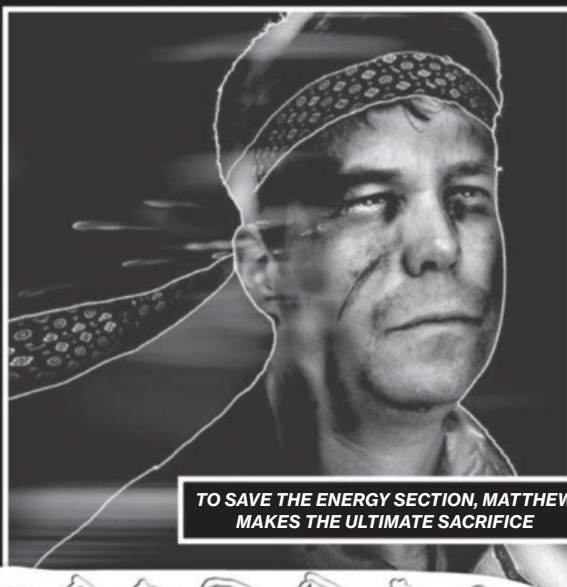




THE VEHICLE SLOWS SUDDENLY



TOO MUCH SNACKING ON DEADLINE HAS MADE THE EDITORS TOO HEAVY



TO SAVE THE ENERGY SECTION, MATTHEW MAKES THE ULTIMATE SACRIFICE



WHEN THE DUST SETTLES, MATTHEW IS GONE



Continued on p96

NNOOOOOOOO!!!

ENERGY

EDITED BY MATTHEW PHILIPS

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C-SUITE

Terminus Rex: An Oil King Exits the Stage

ExxonMobil

Whoever succeeds Rex Tillerson as CEO of Exxon will inherit a company that's far poorer and without obvious growth opportunities **BY JOE CARROLL**

A decade ago, when **ExxonMobil** Chief Executive Officer Lee Raymond was nearing retirement and looking for a successor, Rex Tillerson seemed the perfect candidate.

A 53-year-old native Texan with an engineering degree and a commanding physical presence, Tillerson was an Exxon lifer who'd spent 30 years in the "upstream" side of the business, dedicated to finding and producing oil and gas. His résumé included stints in Yemen and Thailand. Tillerson's chief rival for the job, Ed Galante, came from the "downstream" side—refining crude and natural gas into fuels and chemicals—important but not anywhere as much as the upstream division, which accounts for about 80 percent of Exxon's profits. In January 2006, Tillerson became chairman and CEO. By the end of the month, Galante had retired.

America's largest oil company is again looking for its next leader. Tillerson won't hit Exxon's mandatory retirement age of 65 until March 2017, but sometime in 2016 the board will choose his successor. The contest

is strikingly similar to the last one. The leading candidates are Jack Williams, who runs the division responsible for more than 45,000 oil and gas wells around the globe, and Darren Woods, chief of the refining business, which makes 10 million gallons of gasoline, diesel, and other fuels every hour of every day.

The winner will take control of a corporation that remains impressive by almost every measure. It pumps enough crude

to fill a supertanker every day, employs 75,000 people, and generates \$400 billion in annual sales. Exxon's untapped reserves are so big, the company could continue current rates of production for almost 20 years even if it never finds another barrel of crude. Yet the Exxon Tillerson will pass on is significantly diminished from the one he inherited.

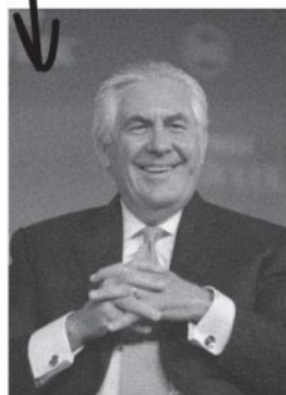
When Tillerson took over, Exxon had \$28.7 billion in cash and was pumping almost 4.3 million barrels of crude daily. Today, Exxon's output is down to 4 million barrels a day, and its cash reserves have declined 85 percent, to

\$4.3 billion, eroded by soaring project costs and collapsing energy prices. "The world has changed dramatically since Rex Tillerson took over," says Brian Youngberg, an analyst at Edward Jones, a brokerage and advisory firm. "The fact that he's leaving his successor a company that produces less than it did 10 years ago says a lot."

When he became CEO, Tillerson had abundant exploration prospects from West Africa to Latin America after the \$88 billion purchase of Mobil in 1999. With most of that inventory played out, he's had to hunt for sources of growth. His two biggest moves have been busts so far. In 2010, after doubting the potential of the U.S. shale patch during his early years as CEO, Tillerson negotiated the \$35 billion acquisition of XTO Energy, a Texas shale gas driller. By 2012 natural gas prices had crashed and have remained historically cheap. "He made a bet on natural gas prices that turned out to be dead wrong," Youngberg says.

In 2011, Tillerson entered a joint venture to drill in the Russian Arctic alongside Kremlin-controlled **Rosneft**. The deal soured after Vladimir Putin's Ukrainian intervention triggered international sanctions against Russia, forcing Exxon to abandon the project and the \$1 billion it had already spent. At less than \$50 a barrel, oil is almost half the price it was during most of Tillerson's tenure as CEO. And his successor will have a hard time finding big new oil fields. "ExxonMobil has no growth and declining returns, and it's not clear what changes that, other than oil prices," says Wolfe Research analyst Paul Sankey. Still, compared with rival oil companies, Exxon has managed the downturn fairly well, avoiding mass layoffs and maintaining its AAA credit rating. The cash it spent went toward mega-projects that it says will deliver profits for decades.

In March, Tillerson said Exxon plans to double its crude output from U.S. shale in three years. That strategy could favor Williams for the top job, given his experience as Tillerson's hand-picked choice to lead XTO after the acquisition. Williams did well shielding XTO's independent wildcatting engineers from Exxon's rigid centralized decision-making. He allowed XTO to operate as a semiautonomous unit with its own headquarters and purchasing authority. This latitude could pay off, as Exxon leans heavily on XTO's expertise to increase its U.S. shale production. Meanwhile, Woods has spent the past three years shedding Exxon's weakest refining units, cutting costs, and boosting profits. Ultimately the decision about who succeeds Tillerson will come down to whether the board favors the architect of the company's advance into shale or the engineer who sold Exxon properties to improve profits. If it's anything like the last time, the loser may have to find a new place to work.



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CEO BE THE ONE
WHO FINDS OIL
OR THE ONE WHO
REFINES IT?**

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OIL Shale 2.0

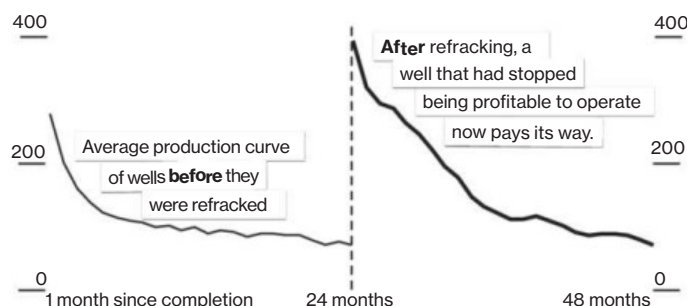
Cheap oil was supposed to cripple U.S. shale drillers, but the industry has become leaner and more efficient. Costs are down, and better technology is reviving older wells. One big problem: Higher borrowing costs are eating into profits.

BY EVAN APPEGATE, PETER PULIKKAN, AND WILLIAM FOILES

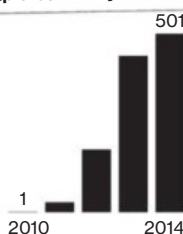
MEASURE ONCE, FRACK TWICE

Horizontal drilling allows a rig to reach tricky deposits. Refracking wells that were drilled only a few years ago can squeeze up to 40 percent more oil out of them.

Barrels per day

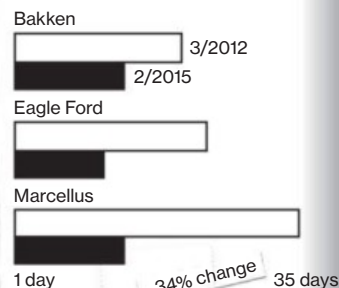


Number of refracking jobs completed each year



One-third of all refracks over this period took place in Texas' Permian Shale.

Change in average time needed to drill one well



DE FACTO STORAGE

Drilled-but-uncompleted wells can be quickly tapped (for not a lot of money) when oil prices rise.

1 well 150+ wells Shale play

Bakken Shale

-44%

Change in number of wells completed, June 2014 vs. June 2015

Woodford Shale

-48%

Permian Shale

-55%

Eagle Ford Shale

-49%

5,000+

Number of drilled but uncompleted wells

Drilling represents 40 percent of the total cost to construct a well.

PUMP MORE WITH LESS

Rig count

2,500

1,250

500

U.S. oil production is expected to fall to an average of 8.86 million barrels a day in 2016. If higher demand and lower production lift prices next year, oil companies

will likely finish
uncompleted wells
and open the spigots.

Improved technology means drillers are pumping more oil using fewer rigs.

U.S. crude oil production, barrels per day

Number of crude oil rigs
in operation

Production

10m

8m

6m

4m

10/2010

10/2015

2016 projection

WHITHER THE DRILLERS?

Improving technology makes for more productive drilling, but that doesn't translate into higher profits when low crude prices force the entire industry to make do with less revenue.

Change in index of prices
for drilling oil wells

35%

0%

9/2010

9/2015

Low oil prices beget belt-tightening

in the oil services sector, which
means the companies that do the drilling
have to charge less.

Drillers have to borrow to pump all this
cheap oil and keep cash coming in so they
can service their **debt**. To keep
drilling, they have to keep **borrowing**,
and so on, until Wall Street
cuts them off
or prices rise and they can get paid more.

Marcellus Shale

-43%

DEBT RECKONING

Cheap oil squeezes producers, who have to borrow heavily to keep pumping just to pay the interest on the money they borrowed.

West Texas Intermediate (WTI) crude price

\$120

\$80

\$40

10/2010

10/2015

Average yield on non-investment-grade bonds

Borrowing at **12 percent** is tough:
The share of oil producer cash flow
used to service debt **almost doubled**,
from 42 percent to 82 percent, from
Q1 2012 to Q2 2015.

15%

10%

5%

10/2010

10/2015

All corporate bonds

Energy bonds

U.S. onshore producers' net income

Median debt-to- cash-flow ratio

315%

\$6b

\$0b

-\$6b

-\$12b

237%

Q2 2010

Q2 2015

The 44 U.S. onshore drillers (represented in this chart),
which pumped more than a third of U.S. crude, are hurting.

*AVERAGING DRILL TIMES FOR BAKKEN, EAGLE FORD, WOLFBERY, MARCELLUS, DJ BASIN, AND MISSISSIPPIAN SHALE PLAYS.
DATA: U.S. ENERGY INFORMATION ADMINISTRATION, EVALUATE ENERGY, PRIMARY VISION. DATA COMPILED BY BLOOMBERG

CLEAN POWER

Renewables Will Have To Stand on Their Own



111

The U.S. is following some European countries by cutting back on tax credits for wind and solar **BY MARK CHEDIAK AND CHRIS MARTIN**

In 2016 the U.S. will learn if renewable energy can survive without government support. The most significant tax credit for solar power will expire at the end of 2016, and the biggest one for wind already has. These federal subsidies have provided wind and solar developers with as much as \$24 billion from 2008 to 2014, according to Bloomberg New Energy Finance. That's led to a 12-fold increase in installed capacity over the past decade, helping lower costs at least 10 percent each year.

Combined, wind and solar still generate less than 5 percent of electricity in the U.S. The subsidy cuts come as both industries face stiffer competition from ultracheap coal and natural gas. An NYSE Bloomberg global index of solar

stocks, including those of big developers **SunEdison** and **First Solar**, has fallen about 35 percent since June. A comparable wind index is down 20 percent.

Solar developers are racing to finish projects before the end of 2016. More than 8.5 gigawatts of solar capacity will go online in 2015, followed by at least 11 gigawatts in 2016, BNEF says. Without the tax credit, which reimburses developers 30 percent of a project's cost, BNEF expects solar installations in 2017 to drop about 70 percent.

Rhone Resch, head of the trade group Solar Energy Industries Association, says cutting tax incentives could cost the industry 100,000 jobs and erase \$25 billion in economic activity. With subsidies, solar in most parts of the country remains

more expensive than natural gas, coal, and nuclear. Without subsidies, solar is 35 percent to 40 percent more expensive, according to Bloomberg.

Wind is in better shape, partly because it's been through this before. Installations fell 90 percent in 2013, when its biggest federal subsidy expired. The \$23-per-megawatt-hour tax credit was retroactively extended to cover projects under construction in 2014; it remains in limbo. But even without the tax credit, turbines can now compete with fossil fuels in parts of Texas and Oklahoma.

In reducing government backing, the U.S. is following Europe's example. After years of generous renewable subsidies, Germany, Spain, and the Czech Republic have cut back recently. In January the U.K. plans to slash subsidies for rooftop solar panels by 87 percent. This is all part of an investment cycle that's moving in phases around the world, says Jigar Shah, the founder of SunEdison. "The incentives created a global industry that can move to the hot markets. First it was Europe, then the Americas, and now it's in China, India, and Africa."

END

NATURAL GAS

LNG Buyers Gain The Upper Hand

New projects in Australia and the U.S. will come online as demand weakens **BY BEN SHARPLES**

Next year, on a remote island off Australia's western coast, the world's most expensive liquefied natural gas export terminal will start shipping cargoes into a market that has changed vastly since 2009, when the project was approved. **Chevron's** \$54 billion Gorgon LNG facility, initially budgeted at \$31 billion, was supposed to have begun operations in 2014. Labor disputes have delayed it, and lower LNG prices have potentially reduced its profitability.

LNG producers no longer have the bargaining power they once did. Weakening demand in Asia combined with an increase in LNG supply is giving the world's biggest buyers not only cheaper gas but also more say on how contracts are designed. "The buyers have the upper hand," says Neil Beveridge, an analyst at Sanford C. Bernstein.

LNG suppliers have historically been able to lock customers into 20-year contracts, with clauses that

restrict the resale of gas. In Japan, the world's largest LNG market, two of the country's largest utilities have teamed up to gain leverage and demand more flexibility. **Jera**, a joint venture of **Tokyo Electric Power** and **Chubu Electric Power**, says it will no longer sign contracts that give producers control over the destination of the product.

If buyers succeed in negotiating better terms, the LNG market could become more like the one for crude oil, where producers, suppliers, and traders all compete for profits through constant buying and selling. That would require a fully functioning spot market, where supplies are traded for immediate delivery, a development that's still a decade away, Beveridge says.

By then, Australia will be the world's top LNG exporter, unseating Qatar. For the first time in eight years, exports from Qatar shrank in 2014. Qatar still provides about a third of the world's LNG, but customers are

CONT.

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lining up for new supplies from Australia and the U.S. Gorgon will join three other LNG megaprojects that have been completed recently along Australia's east coast and will tap the country's vast gas deposits. In the U.S. five LNG projects under construction will export cheap natural gas unlocked by the shale boom. The first will begin exports in 2016. Over the next decade the U.S. is likely to become a net exporter of natural gas and compete with Australia to be the world's leading LNG supplier.

After these projects come online, it may be a while before any others are built. "LNG is the last of those sectors where we're seeing a wave of new projects hit the market," says Daniel Hynes, a commodity strategist at Australia & New Zealand Banking Group. "It's coming at a time when demand is weakening across the board. It's clearly a tough market."

END

EXPORTS

Iranian Oil Goes Back on the Market

After years of sanctions, the country is boosting production and aiming to win customers back from the Saudis and Russians **BY JAVIER BLAS**

The fate of the oil market in 2016 depends in large part on a series of oil fields with names such as Ahwaz, Gachsaran, Bibi Hakimeh, and Darkhovin. All of them are pumping crude buried thousands of feet under the hills of the Zagros mountain range in western Iran. Since mid-2012 the fields have been producing far below their capacity because of U.S. and European sanctions limiting Iranian oil exports. Now that Tehran has reached a deal with the Western powers to resolve the dispute over the country's nuclear program, Iranian engineers are working to bring the fields back to full production.

"Immediately after lifting sanctions, it's our right to return to the level of production we historically had," Iran Oil Minister Bijan Namdar Zanganeh said in September, weeks before the first international oil conference held in years in Tehran.

The country's return to the oil market comes as the world is producing much more oil than it needs. According to the International Energy Agency (IEA), global oil production in the first half of 2015 averaged 95.7 million barrels a day, while average daily consumption came in at only 93.8 million barrels. The difference of almost 2 million barrels a day—equal to the daily consumption of France—has forced traders to turn supertankers into floating storage facilities. The Iranians had to make a similar move when sanctions hit in 2012, converting their extensive fleet of crude tankers into giant storage bins that have spent much

of the past three years anchored in the Persian Gulf.

More Iranian oil on the market in 2016 will extend the oversupply. The impact will reverberate across the world, hurting oil-producing countries such as Russia, Saudi Arabia, and Venezuela, as well as entrepreneurial shale companies in North Dakota and Texas, and major oil companies including **ExxonMobil** and **Royal Dutch Shell** (page 128). As traders anticipate the return of Iranian oil, the futures market is already lowering its expectations for prices next year, with contracts for December 2016 trading at less than \$60 a barrel.

Zanganeh has repeatedly said Tehran would increase its production by 1 million barrels a day within weeks of the end of the sanctions, expected to be lifted sometime during the first half of 2016. The IEA estimates that within six months of sanctions ending, Tehran could bring daily production to 3.6 million barrels—or about 800,000 barrels a day above current production. That would mark Iran's highest level of crude output since 2011.

Oil traders and analysts are far more conservative about the country's ability to quickly increase production. "We believe the potential removal of Iranian sanctions could provide strong conditions for a recovery in oil production, but we do not share the optimism expressed by some market commentators on the speed of the production turnaround," says Ildar Davletshin, an analyst at Renaissance Capital in London.

CONT.



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Iran could surprise the pessimists. Oil-dependent countries have a history of recovering production faster than anticipated after disruptions. In 2003, Venezuela's state-owned **Petróleos de Venezuela** was able to lift output by 2 million barrels a day in only four months despite widespread damage to equipment resulting from an attempted coup against President Hugo Chávez. In 2011, after civil war broke out in Libya and the country's oil production fell to zero, the market widely expected it to take 18 months to raise output by 1 million barrels a day. Production surpassed that level in less than six months.

Whatever Iran is able to produce next year, much of its crude could end up in Southern Europe, as Iran aims to regain customers it lost in France, Italy, and Greece. After sanctions forced European countries to stop buying from Iran, Southern Europe turned to Saudi Arabia, Russia, and Iraq as its main suppliers. Analysts say that to take back market share, Iran will have to offer customers cheaper crude than the Saudis and Russians.

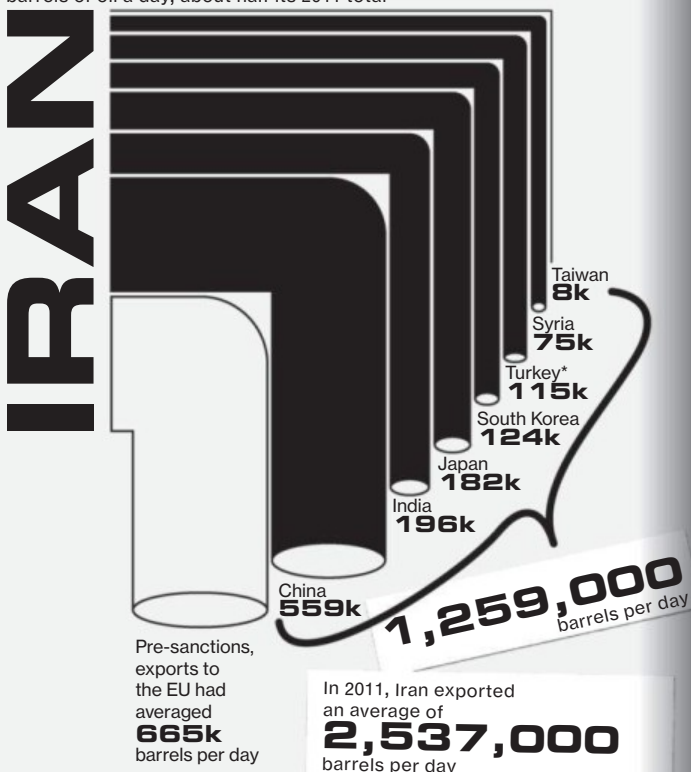
Another unknown is the amount of oil Iran has in storage, both inland and in supertankers in the Persian Gulf. Estimates range from about 12 million barrels to 60 million barrels. The exact composition of what's in storage is also unknown: Crude oil, fuel oil, and so-called condensate (a form of high-quality crude) are all possible.

Regardless of the final increase, Zanganeh, Iran's oil minister, has a message to the rest of the energy world: "Our only responsibility here is attaining our lost share of the market, not protecting prices."

END

OIL EXPORTS 2015

Through September, Iran exported an average of 1.26 million barrels of oil a day, about half its 2011 total



DATA: BLOOMBERG (*DATA FOR TURKEY IS THROUGH JULY); OPEC

TRADING

China Gets Its Own Crude Contract

The world's top oil importer wants traders to flock to yuan-based futures **BY BEN SHARPLES**

Crude oil is flowing eastward as rising demand in Asia outstrips the West's stagnant appetite. Next year, China wants traders—including oil speculators, refiners, and big state-owned companies that buy and sell futures contracts—to follow a similar path. By the end of 2015, China, the world's No. 1 oil importer as of April, may start its own crude futures contract.

The idea is to establish a Chinese rival to the world's two most traded oil contracts: West Texas Intermediate (WTI), housed on the New York Mercantile Exchange, and Brent Crude Futures, owned by ICE Futures Europe in London. The yuan-based contract will trade on the Shanghai International Energy Exchange and will be among the first Chinese commodity contracts available to foreign investors as China promotes global use of its currency.

"Consumption has been shifting east since 2009," says Gordon Kwan, an analyst at Nomura Holdings in Hong Kong. "China could have more sway in setting benchmark prices with new crude contracts in Shanghai, potentially negatively impacting trading volumes in Brent and WTI over the next 10 years."

As it becomes more exposed to price swings on global markets, China wants its pricing influence to match its purchasing power. State oil giant **China National Petroleum** predicts that this year, for the first time, China will import more than 60 percent of the oil it consumes. Over time, the new contract will give China more control over the price of oil it imports, because the value will reflect the supply-and-demand dynamics of China rather than those

of the U.S. Midwest or Europe's North Sea, where stored crude is represented by trading in New York and London.

Before China can exert greater pricing power, traders will have to use its contract. "You need buyers and sellers to come together voluntarily, so it may take a long time," says Victor Shum, a vice president at IHS Energy, a consulting firm. "Even without their own benchmark, China has had a significant impact on crude futures through their buying."

Like any commodity derivative, this one will be backed by physical supplies. The Shanghai exchange is planning to use more than 14 million barrels of storage capacity along China's coast; the oil backing the contract must come directly from the country where it's produced. No blending will be allowed during shipping or storage; traders won't get to create custom crude varieties.

"Brent and WTI remain key crude benchmarks," says Ehsan Ul-Haq, senior analyst at KBC Energy Economics. "The majority of transactions in the oil world are linked to derivatives related to Brent. If Shanghai is able to offer similar trading instruments, we might see some shift." —*With Bloomberg News*

END

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DALLAS MAYOR MIKE RAWLINGS GETS ANIMATED WHEN HE TALKS ABOUT HIS CITY.

Like any big-city mayor, Rawlings can rattle off many reasons why his city is the greatest place to live and do business. Why? It has a pro-business regulatory environment and a highly educated workforce. It has ongoing redevelopment and great low-cost housing. And don't forget, it has two centrally located airports that offer unprecedented domestic and global access.

The mayor will also remind you that major corporations are headquartered in Dallas—giants like AT&T, Texas Instruments, Southwest Airlines and Neiman Marcus—and others, including Topgolf, Active Networks, Nationstar Mortgage and TRT Holdings, have recently decided to relocate there. And while all of this sounds ideal, Rawlings unexpectedly throws up a wry warning: Dallas is not for everyone.

"It's only for those companies that want to make more money, have an easier life and enjoy their lives better," he explains

with a grin. "If you're a company that wants to have a greater return on your shareholder value, and you want to do it while enjoying life, then Dallas is right for you."

Rawlings is an avid cheerleader for a city that's undergone a huge transformation over the past 10 years. He's got reason to be: Dallas is home to nine of the 500 largest companies in the U.S., and—perhaps more importantly—hundreds of the fastest-growing private companies. It's good for employees, too: Reasonable housing costs, below-average commuting times and no state income tax have made the region an attractive place to live. It's why the city has experienced unprecedented population growth in the past few years, with skilled workers arriving to provide the talent that expanding businesses need.

"We created more jobs here last year than any other market in the United States, and we're the fourth-largest market after

New York, L.A. and Chicago," Rawlings says. "Three hundred people a week are coming to live and work here. In fact, we're the number-one place for U-Haul truck drop-offs in the U.S. And that's because people are coming here to work."

CONVENTIONAL WISDOM

People are coming to visit, too. Over the past five years, Dallas has increasingly become a national destination for both leisure and business travel. The Dallas Convention & Visitors Bureau, responsible for booking conventions, meetings and sporting events, last year attracted 46 major conventions to the city, making Dallas one of the five most popular meeting destinations in the U.S.

Phillip Jones, CEO of the Dallas CVB, says the impact of \$23 billion worth of recent development in the city—new parks, museums, hotels and restaurants—means that 95 percent of the time that the bureau shows Dallas to prospective convention customers, they end up booking their event in this exciting, dynamic and cosmopolitan city.

"If you look around the country, there is really no city that is investing the sums that are being invested here," says Jones. "And there's a good return. Last year visitors spent about \$7.3 billion in the city, and we are on track for another record year in 2015."



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A major advantage touted by the bureau is the city's location and transportation infrastructure. Truly centrally located, Dallas can be reached in less than three and a half hours by air from most points in the U.S. And with over 200 nonstop flights to 148 domestic and 56 international cities, DFW International Airport and Love Field provide easy access.

Apart from its location, the city's biggest selling point for visitors is the dramatic renaissance that's taken place in the heart of the city, which is brimming with new hotels, restaurants and stores. "About 10 or 11 years ago, Downtown Dallas was dead," Jones says. "There were maybe 250 people living there. We had empty buildings because folks had moved to the suburbs. Today, we have about 40,000 people living in the greater Downtown area."

REDEVELOPING DOWNTOWN

The change is due to the trailblazing development of the Downtown area, and pioneering investment by Headington Companies, owned by local billionaire Tim Headington. In 2003, the company, which operates in the oil and natural gas, film production and real estate/hotel development businesses, bought a 20-floor neo-Gothic building on Main Street and transformed it into The Joule Hotel, a 160-room luxury property that opened in 2008.

Since then, the company has added to its Downtown portfolio of properties, and will soon open the Forty Five Ten boutique, a 40,000-square-foot retail concentration

The third of three sculptures in the Traveling Man series. Its riveted metal sheets evoke the railway history of Dallas' Deep Ellum neighborhood.

across the street from The Joule, to complete the firm's vision of turning the area into a major shopping and dining destination.

"We wanted to create a social, design-driven urban environment where people can come—whether to shop, dine or just walk around—and feel like they're part of something vibrant and exciting," says Michael Tregoning, President of Headington Companies. "Someplace with an urban edge—cool, interesting, thought-provoking."

Headington has invested more than \$200 million in its Downtown projects, and other developers have followed, triggering a revitalization and adaptive reuse boom. Downtown buildings that have sat vacant for decades are being acquired by new investors; property values are up, the residential population is swelling and foot traffic is growing.

Catapulted by the opening of The Joule Hotel, the Main Street District is now home to more than 350,000 square feet of retail and restaurants. City-led projects, such as Klyde Warren Park (built over a highway and opened in 2012), the spectacular Continental Avenue Bridge (designed by famed architect Santiago Calatrava) and the rehabilitation of the Dallas Farmers Market are driving massive redevelopment in the 15 districts that comprise Downtown.

"Downtown is unrecognizable from

where it was when we first started to invest,” says Tregoning. “Ten years ago, it was moribund. It suffered from neglect and lack of capital investment. There was not much in the way of entertainment for either a local resident or a visitor.”

Nevertheless, Headington made a leap of faith. The impetus, Tregoning says, was the belief that Downtown, which had once been the heart and soul of Dallas, could be successfully redeveloped. “Where we built The Joule is a unique location, and we felt that the price was right to begin testing our thesis.”

Headington's goal was to develop an engaging, high-end hotel in a lavishly restored historic building that would provide the area with a centerpiece that would be impossible to find elsewhere.

“There was nothing to suggest that it was going to be immediately successful,” Tregoning says. “But our theory is that if you deliver a stylish, unique product with enormous intrinsic value, such as Downtown, you can make a success out of it. It turned out well for us. We are very proud of it.”

Tregoning says that Headington will concentrate its development focus in the Main Street area for the next two or three years, and also plans to tackle a number of other development locations further down the line, including a 9.5-acre site in the middle of Downtown. “It has been our experience that economic growth follows capital, especially private money,” says Tregoning. “We believe Dallas is a great place to invest.”

Being a local company also allows Headington to take extra pride in what it has created. “We live here. We're friends and enthusiastic supporters of Dallas,” Tregoning adds. “Because what we build is in our backyard, it means more to us than just making money. We hope to create something lasting for the city and, in some ways, a legacy for Headington.”

A HUB OF EXCELLENCE

Dallas's future legacy is also being burnished by new arrivals such as AT&T, which relocated from San Antonio in 2008, and is committed to investing in the city's future.

“We want to invest to support the com-

munity where our employees live and work, because they're vital to our business,” says Steve McGaw, Chief Marketing Officer of AT&T Business Solutions. “If we can help Dallas grow in attractiveness, we can entice world-class talent to work here—both at the entry and executive level. And that's what you need for a company that's transforming itself. At the end of the day, it's your people who transform it.”

As well as supporting sports and the arts—the futuristic \$1.5 billion AT&T Stadium is home to the Dallas Cowboys, and the 10-acre, multi-venue AT&T Performing Arts Center anchors the Downtown Arts District—the company has established two innovation centers that it believes will drive the city's reputation as a hub of excellence.

“We have five innovation labs globally—they're called the AT&T Foundry—and we've based two of them in the Dallas area,” McGaw explains. “Since 2011, they've become incubators for us to create not just new technology, but new business models, and move ideas to the marketplace up to three times faster.”

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Home to the Dallas Opera and Texas Ballet Theater, the AT&T Performing Arts Center is one of the most technologically advanced venues in the country.

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AT&T has also invested in its new Executive Briefing Center in Dallas, where executives from the company's current and potential customers, including small and medium-size businesses as well as other Fortune 1000 companies, can learn about AT&T's product portfolio.

"We wouldn't have established this center here, or the innovation labs, if we didn't think Dallas was an extremely attractive place to invite people, or a place to which we could attract talent," McGaw says. "Investing in these facilities and putting our name on the stadium and arts center are indicators that we're committed to this community."

AT&T moved to Dallas because it fulfills all the requirements that the company—the largest global integrated carrier for business (by revenue, FY 2014)—believes will enable it to grow. The city is seen as ideal because its airports provide convenient access to domestic and global travel; its local transportation infrastructure, lively Downtown and relatively low cost of living are attractive to workers; its tax and regulatory environment are pro-business; and its exceptional schools and universities provide a great local talent pool.

"We believed it was possible to build a strong employee base in Dallas," McGaw notes. "Where you have all these desirable factors, you have the sort of city where growth is going to compound and accelerate."

While working at AT&T, McGaw says, he's been responsible for relocating hundreds of families to the city. "Members of my team,

many of whom only moved here in the past couple of months, tell me, 'Dallas is even better than I expected!'" he adds. "I'm seeing from the feedback they're giving me and their productivity that they're happy here."

Well on its way to becoming a formidable hub of business and technological innovation, McGaw believes Dallas will continue to grow in importance as more companies move there or open satellite offices to participate in its success.

"Dallas is our home, and we're very pleased we've headquartered here," McGaw says. "It's a world-class city whose only trajectory is up. We're set to continue to invest in it, support it—and raise our game as a global player here."

THE NEW TALENT PIPELINE

As the city grows, an important differentiator for businesses evaluating Dallas is its educated, talented and diverse workforce. Central to the city's educational pedigree is SMU, a private research university that has played an important role in higher education in Dallas for more than a century.

While the university offers global study opportunities and operates satellite campuses in Plano, Texas, and Taos, New Mexico, it is still small enough to offer a personalized education, with about 11,000 students in Dallas, of which about 6,500 are undergraduates.

"We're a highly impactful university," says Brad Cheves, Vice President for Development and External Affairs at SMU. "We couldn't know what the future would hold when we opened in 1915, but we now attract students

from all over the world, and we are very much an international leader in education."

SMU is home to seven cutting-edge schools and colleges—the Lyle School of Engineering, Dedman School of Law, Simmons School of Education and Human Development, Dedman College of Humanities and Sciences, the Meadows School of the Arts, Perkins School of Theology and the Cox School of Business. The university is a great fit as a research partner for companies that relocate to Dallas, and provides a pipeline of highly qualified graduates to join them.

"We are a strong force in our community, both in terms of the intellectual capital we attract through our students and our world-class faculty, but also with the interaction we have with the business community throughout Dallas and the Southwest," Cheves says. "With companies such as Toyota, Liberty Mutual, State Farm, Exxon and AT&T minutes away from our campus, we have the ability to work with them on research projects and become real partners to drive innovation."

Cheves notes that arts and culture are also important to the corporations that relocate to Dallas, and SMU has much to offer in this regard. The university's Meadows School of the Arts was ranked the top comprehensive school of music in the country by College Factual; and the SMU Meadows Museum has one of the finest Spanish art collections outside the Prado.

Cheves adds that the university also has an important role to play in the continued growth of the city: "The future of Dallas is as bright as the future of SMU, in that we have grown together," he says. "Our graduates provide leadership to the city. They're the philanthropists of our city. And as a distinguished center for teaching and research located near the heart of Dallas, SMU is positioned to be a real engine for the kinds of activities that will shape our future."

IMPROVED CARE, LOWER COSTS

Equally vital to the success of the rapidly expanding area is a quality healthcare system, and Baylor Scott & White Health, serving Dallas and North Texas, is one of the largest nonprofit healthcare systems in the U.S.—a result of the 2013 merger of Baylor Health Care System and Scott & White Healthcare.

"It was a really positive merger that allowed both organizations to align their mission focus and benefit from different areas of expertise," says Cliff Fullerton, President at Baylor Scott & White Quality Alliance. "By learning from one another, we've been able to improve care while managing costs."

In the past year, Baylor Scott & White Health has increased access to quality care, with more than 800 access points for 5.3 million patient encounters annually; expanded its commitment to serving community needs through \$701.8 million in community benefit spending; and created the Baylor Scott & White Quality Alliance, an accountable care organization (ACO) comprised of over 4,000 physicians.

"With Baylor Scott & White Quality Alliance, our number-one priority is to improve the value of healthcare," Fullerton says. "We look at what families have to deal with—how the cost of healthcare impacts them and impacts business. And with the Baylor Scott & White Quality Alliance, we are bringing together physicians, hospitals

and health plans to create the value our community needs."

Cost, quality of care and improving the patient experience are the three goals of Baylor Scott & White Quality Alliance, and by using technology and comprehensive care management teams to deploy appropriate resources, it's already been able to deliver lower costs and greater accessibility to care within its own Baylor Scott & White North Texas division employee health plan.

"In North Texas, from 2012 to 2014, there was double-digit compounded health-care inflation, and during those two years we managed to keep our healthcare costs flat," Fullerton says.

He adds that Baylor Scott & White Quality Alliance initiatives are an incentive to the companies that are considering a move to Dallas. "For companies that relocate here, we are able to improve on absenteeism, and able to hopefully improve on 'presenteeism'—that is, improved productivity while employees are at work," he says. "And that's attractive to them."

THE BEST IS YET TO COME

As Dallas grows in importance and continues to flex its muscles in the U.S. business world, Mayor Rawlings says that what will continue to make the city great for business is its can-do, optimistic spirit. It's something he believes is palpable, even provable statistically.

"When I first became mayor, I worried I was smoking my exhaust when I felt the sense of optimism we have in our city," he explains. "So I did a piece of research. I polled people across the states with the question, 'Are the best days ahead of us or behind us?'"

Rawlings' poll found that, while national opinion was a coin flip—with 45 percent thinking the best days are ahead and 44 percent thinking they're behind—in Dallas itself, 65 percent of the population believe the best days are still to come.

"The people who've moved here have always had a sense that this is where they'll get their chance to grab the brass ring," Rawlings concludes. "That sense of optimism is part of the cultural ethos here. It's what makes Dallas a great place to do business, and a great place to live." — John O'Mahony

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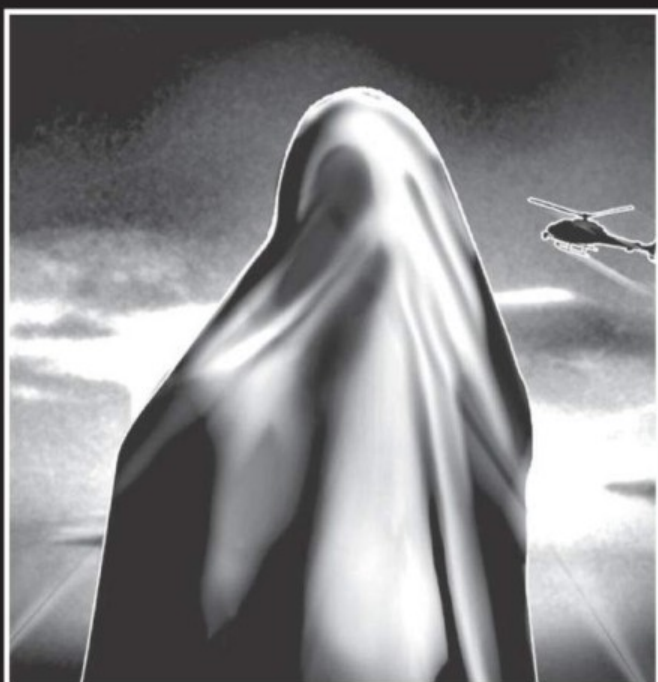
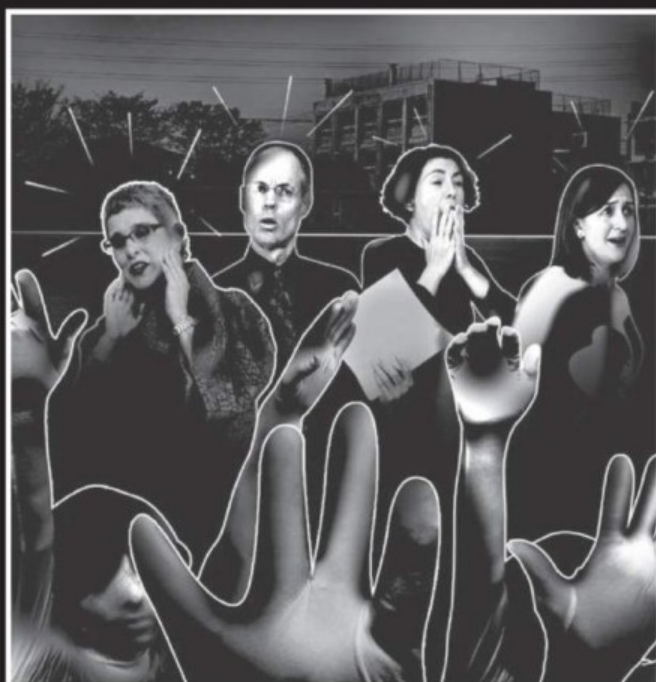
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LUCKILY, PETER FINDS THE ENTRANCE TO A SEWER AS ELLEN GRABS THE POLITICS SECTION

Continued on p117

POLITICS

VOTER'S ALMANAC

EDITED BY ALLISON HOFFMAN

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What's at Stake

With no incumbent on the ballot, the 2016 election will present a stark choice between a Democratic Party moving to President Obama's left and a Republican alternative that's veered sharply rightward. Although the views of the American public have remained relatively stable over the past 60 years, the ideological polarization of Democratic and Republican politicians has increased steadily for decades. "The chasm between the two parties is the greatest it's ever been," says Neera Tanden, president of the Center for American Progress, a liberal Washington think tank.

What divides candidates in both parties isn't just their solutions to policy problems; they disagree about what the problems are. In debate after debate, the most hotly contested issues differ almost entirely depending on which party is doing the talking. The Democrats focus on climate change, police brutality against black Americans, and the need to raise the minimum wage, **ALMANAC P110** whereas Republicans emphasize immigration restrictions, religious liberty, and their desire to unwind Obama's major achievements, including the Dodd-Frank financial reforms and the Affordable Care Act.

Even within Democratic and Republican spheres, the discussion has shifted significantly. Consider gun control, **ALMANAC P104** an issue Democrats assiduously avoided for a decade, after party strategists concluded it cost Al Gore the 2000 election. No longer.

2016 really may be the most important election of our lifetime

BY JOSHUA GREEN

"I've been told by some to quit talking about this, to quit shouting about this," Democratic front-runner Hillary Clinton declared about her push for stricter gun laws at an Oct. 15 rally in San Antonio, after attacking her chief rival, Bernie Sanders, for his tepid support of gun control. "I will not be silenced. We will not be silenced. We must continue to speak out."

In almost every area of domestic policy, Democrats and Republicans would point the country toward radically different futures. The centerpiece of Obama's energy initiative, the Environmental Protection Agency's Clean Power Plan, would restrict emissions from power plants. Republican-led states are challenging it in court. If it's struck down, the next president will rewrite the rules. Every Democratic candidate shares Obama's commitment to halting climate change.

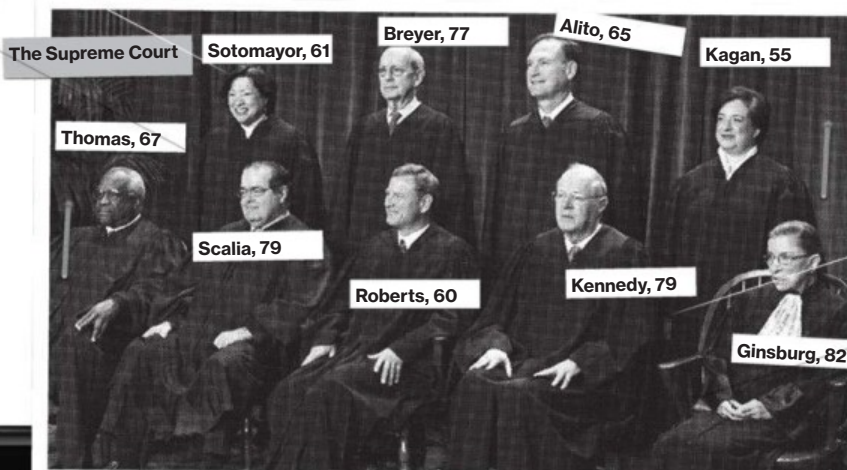
ALMANAC P100 Most Republican hopefuls reject the science that explains rising global temperatures and have vowed to scrap controls on greenhouse gas emissions. "I will stop the EPA's Clean Power Plan," Marco Rubio said while introducing his energy policy on Sept. 2.

Or take health care. Any

Democratic president will preserve the Affordable Care Act. "Whoever the Republican nominee is, you can bet that repeal of the ACA will be a part of the platform," says Larry Levitt of the nonprofit Kaiser Family Foundation, which studies health care. "It's Republicans who want to upend the status quo on health care, leaving the parties very far apart." A full repeal may not be politically feasible, because the law covers 17 million people, and even some Republican governors have embraced the federally funded expansion of Medicaid, Obamacare's main vehicle for extending care to the poor. Short of repeal, a hostile president might push to weaken insurance market regulations, cut subsidies for the working class, and cap Medicaid spending.

The widest gap between the parties may be how they would reshape the Supreme Court, which may have the final word over many of these policy questions. By next November, four of the nine justices will be 78 or older, including the court's most frequent swing voter, Anthony Kennedy. Obama's successor may have the chance to replace all four. If so, a Republican president could give the court a 7 to 2 conservative majority; a Democrat could create a 6 to 3 liberal advantage. "There's the potential for a generational change in the direction of the court," says Ed Whelan, president of the Ethics and Public Policy Center, a conservative think tank. "We may be looking at a two- or three-decade entrenchment of a liberal or conservative court."

The inclusive, post-partisan vision that animated Obama's candidacy in 2008 has long been dead. This, at least, is among the dwindling areas of bipartisan agreement. Asked at the Oct. 13 Democratic debate to name the enemy she's proudest of, a beaming Clinton replied, "The Republicans." No one can doubt the feeling is mutual.



END




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VOTER'S ALMANAC



2016 EDITION

Contributors

Peter Coy	Josh Eidelson	Andrew Harris
Phil Mattingly	Eric Roston	Justin Sink
Greg Stohr	John Tozzi	Karen Weise

A

Abortion see Reproductive Rights

Advertising Digital ad spending by campaigns will rise to

\$607m

in 2016, from \$145 million in 2012.
The biggest winners? Facebook and Google.

Analytics see Get Out the Vote

B

Bush, Jeb (R) "I truly fear the president has already succeeded in setting the trap for our party, bringing a new pessimism on the right." Nov. 2, at a rally in Tampa



C

Carson, Ben (R) "More of the same will take us across the brink, and we will have no return." Nov. 2, at a book signing in Tallahassee, Fla.

Climate Change North Carolina billionaire Jay Faison will spend as much as \$175 million to turn out Republican voters concerned about warming.

Clinton, Hillary (D) "I can't think of anything more...outsider than electing the first woman president." Oct. 13 Democratic debate



Congress

There's a War For the Senate

It will be decided in Florida, of course

This year the fight for power in Washington will come down to a magic number: five. That's how many seats Democrats need to reclaim a majority in the U.S. Senate, whether or not they keep the White House. Seven Senate seats held by Republicans will be contested in states Obama won in 2012, including his home state of Illinois.

The most competitive race may be in Florida. Marco Rubio **P108** has said he won't run for reelection while he seeks the presidential nomination, leaving an open seat. The state, where Obama had his narrowest margin of victory in 2012, has a Republican governor, a U.S. senator from each party, and a Republican-controlled congressional delegation. "There's no question that both national parties are going to pour a lot of money into this Senate race," says Susan MacManus, a political science professor at the University of South Florida.

The Republican primary will test the clout of political groups aligned with Tea Party activists. Representative Ron DeSantis, a Freedom Caucus member from a Republican-leaning district in north-eastern Florida, is running against Representative David Jolly, a moderate from a district in the Tampa Bay area. DeSantis's donors include the libertarian-leaning group FreedomWorks, backed by the billionaire brothers Charles and David Koch,

CONT. →

as well as members of the Freedom Caucus, a group of conservative House members whose resistance to compromise drove John Boehner to resign as speaker.

National Democratic groups have lined up behind Patrick Murphy, a 32-year-old South Florida congressman who until a few years ago was a registered Republican. "The U.S. Senate is the backstop for protecting all of this administration's accomplishments," he said at a state Democratic conference over the Halloween weekend. Murphy's facing a challenge from the left from Representative

Alan Grayson, who says he's challenging the party establishment much like Vermont Senator Bernie Sanders. **P110** "We're trying to demonstrate that it's still possible to be a statewide candidate who is unbought and unbossed," says Grayson, evoking the slogan used by Shirley Chisholm, the first black congresswoman, in her 1968 campaign.

"It's not necessarily true that as it goes presidentially, it will also go in the Senate, but keep in mind that whatever's the turnout dynamics, whatever's going on in each of these states for one, it's also there on the other," says Charlie Cook, editor of the Cook Political Report. "So we're looking at a real heck of a race for the Senate."

—Greg Giroux and Toluse Olorunnipa

Cruz, Ted (R) "If you want someone to grab a beer with, I may not be that guy. But if you want someone to drive you home, I will get the job done." Oct. 28 Republican debate



D

Demographics

Swinging States

The number of eligible voters in six battlegrounds has grown, with the increases trending liberal and Democratic **BY DOROTHY GAMBRELL**

Obama's margin of victory in Florida in 2012 was 73,189 votes

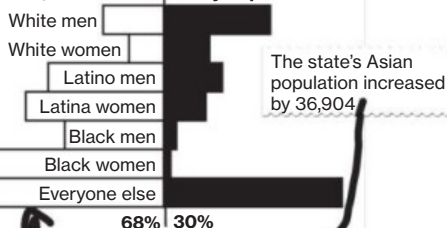
Change in voting-age population since 2012

Party preference of new voters based on 2012 exit polls

Virginia

+2.0%
127,517 potential voters

Likely Democratic | Likely Republican

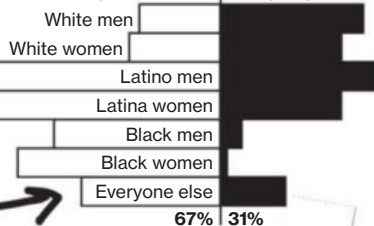


The state's Asian population increased by 36,904

Florida

+3.4%
552,679 potential voters

Likely Democratic | Likely Republican

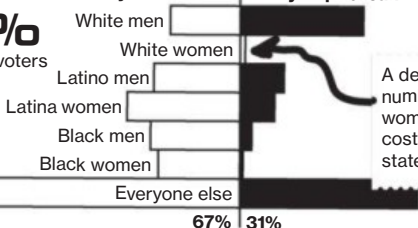


Includes Asians, American Indians, and people of more than one race

Ohio

+0.8%
74,223 potential voters

Likely Democratic | Likely Republican

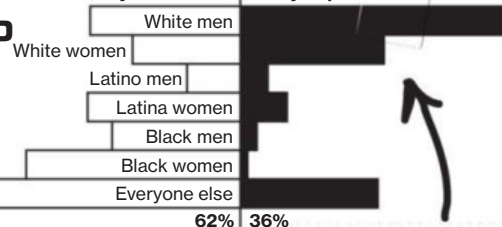


A decrease in the number of white women voters could cost Republicans in a state Obama won twice

Indiana

+1.3%
65,266 potential voters

Likely Democratic | Likely Republican

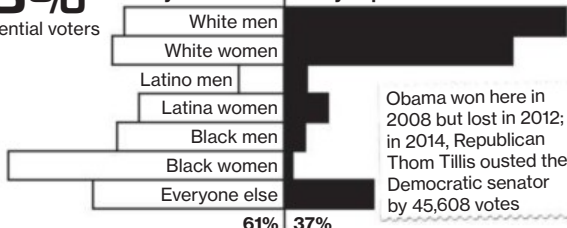


Indiana backed Romney in 2012 and still leans Republican—but voted for Obama in 2008

North Carolina

+2.5%
185,325 potential voters

Likely Democratic | Likely Republican

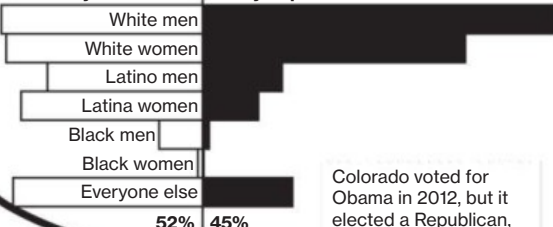


Obama won here in 2008 but lost in 2012; in 2014, Republican Thom Tillis ousted the Democratic senator by 45,608 votes

Colorado

+3.9%
152,446 potential voters

Likely Democratic | Likely Republican



Colorado voted for Obama in 2012, but it elected a Republican, Cory Gardner, to the Senate in 2014

E-MAILS

GET OUT THE VOTE

E

E-mails By court order, the State Department will continue its rolling release of Hillary Clinton's e-mails from her time as secretary of state, until Jan. 29.

F

Facebook see Advertising

Fiorina, Carly (R) "I may not be your dream candidate just yet, but I can assure you I am Hillary Clinton's worst nightmare." Oct. 28 Republican debate

G

Gerrymandering

Block the Vote

A law suit claims Wisconsin's redistricting is unfairly benefiting Republicans

After the 2010 census, the Wisconsin Legislature's Republican leadership asked an outside attorney to advise it on redrawing district maps. The lawyer, hired at taxpayers' expense, did his work in a private map room, which Republicans could enter only if they signed a confidentiality agreement. That offer didn't extend to Democrats, who first saw the proposed changes when they were formally introduced. The new maps were adopted by the Republican-controlled state senate and assembly days after being made public.

In July attorneys sued on behalf of 12 Wisconsin voters who claim that the redistricting, which was in effect for the 2012 presidential election and the 2014 midterm, was unfairly partisan. The case is rooted in a 2014 paper co-written by Nicholas Stephanopoulos, an assistant professor at the University of Chicago Law School, that examined almost every redistricting since 1972. Stephanopoulos, who's one of the lawyers on the Wisconsin case, tried to quantify the results. Gerrymandering generally follows one of two patterns: packing, the cramming of one party's voters into a single district; and cracking, spreading a party's voters across many districts to deny them the chance of reaching a majority.

In a packed district, votes above 50 percent for the majority party are wasted, whereas in a cracked one all votes for the minority party are lost, according to Stephanopoulos's theory. "Even a very fair plan results in lots of wasted votes," he says—but unfair plans result

THERE'S NO UNIVERSAL TEST FOR UNJUST ELECTION MAPS

in one party wasting far more votes than the other, which he calls an efficiency gap. The Wisconsin gerrymander, according to the plaintiffs, was more effective at giving one party an electoral advantage than 96 percent of the political maps he examined.

The Supreme Court ruled in 1986 that gerrymandering could, in theory, be unfairly partisan, but it's never established a way to determine when redistricting crosses the line. Stephanopoulos says he hopes

the Wisconsin case will establish the efficiency gap as the standard for gauging the fairness of election maps.

The state has asked the court to dismiss the case, saying the efficiency gap "is based on the same principle the Supreme Court has repeatedly rejected"—the idea of partisan symmetry, that votes should translate to seats at the same proportion for each party. The problem, the state says, isn't a matter of crafting a new formula. Instead, it's that "no one can articulate a constitutional principle defining what should be measured."

In October a federal district court assigned a three-judge panel to review the case. The trial is set for May 2016. Stephanopoulos says the court should rule quickly. If he prevails, he says, "we want a new map—a fair map—in place for 2016." —Karen Weise



Get Out the Vote

Analytics For Everyone

The trickle-down economics of voter data

Barack Obama's 2008 campaign team reinvented the art of modern campaigning by using data to transform almost every aspect of running for office. It succeeded wildly in turning out infrequent and new voters, and since then its innovations—which included mining individual TV-viewing habits to get more out of advertising dollars—have been hard-wired into both parties' presidential campaigns. That's led to the birth of dozens of consulting firms making grandiose promises to disrupt politics with analytics.

With more money flowing into local races in 2016 than ever, those consultants are marketing the data revolution not just to would-be presidents but to dogcatchers, too. In Ohio, the Republican Senate Campaign Committee's four-person staff contracts with a Washington-based consulting firm, **Optimus**, to acquire data, develop statistical models, and make targeting decisions for candidates running for seats in the state legislature—the same suite of services Optimus is providing to Florida Senator Marco Rubio's **P108** presidential campaign. "If you're Joe Legislative Candidate out on your own, that's a hard thing to do," says John McClelland, executive director of the Ohio committee.

In 2014 the committee spent \$8 million to win three seats. About \$700,000 of it went to Optimus. The firm's analysis led the committee to seek out bargains when placing ads—such as skipping *Sunday Night Football* and buying airtime during *Law & Order* reruns,

CONT.

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To serve as a robust, solutions-focused player in the region, FedEx Express relies on assets like its 23-acre Gateway Hub at the Miami International Airport, which provides refrigerated storage, on-site U.S. Customs Agents and a sorting capacity of 40,000 packages per day. To assemble a sophisticated workforce, FedEx turned to Florida's diverse talent pool. In addition to the state's 630,000-member logistics and distribution workforce, FedEx Express benefits from the many bilingual professionals with experience working with Latin America. Of the 1,100 multinational companies in South Florida, nearly one-

third focus on the region. No personal income tax, streamlined regulations and a favorable corporate tax climate crystallize the company's competitive edge.



which cost a quarter as much but still delivered large numbers of likely voters. "We could have easily spent half our budget doing TV in those three races,"

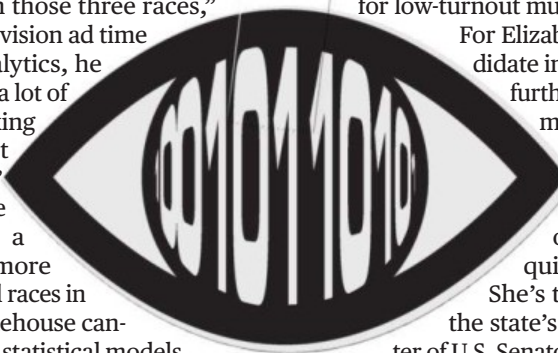
McClelland says. Buying television ad time without looking at data analytics, he says, means "you're wasting a lot of dollars, because you're talking to a lot of people who don't need to hear your message."

The Democratic Legislative Campaign Committee, a national group that spent more than \$15 million on state-level races in 2014, bought the party's statehouse candidates nationwide access to statistical models developed by **Clarity Campaign Labs**, in Washington, which specializes in predicting voter attitudes and behaviors. This year, Clarity has put its services in the hands

of candidates even farther down the ballot. It's created a statistical model to identify voters likely to show up for low-turnout municipal races.

For Elizabeth Brown, a city council candidate in Columbus, Ohio, Clarity went further and developed a proprietary model unique to her race, which typically costs around \$30,000 but can be done for less when combined with research for other candidates. (Brown is not quite Joe Legislative Candidate: She's the former deputy director of the state's Democratic Party and daughter of U.S. Senator Sherrod Brown.) "Candidates

hear 'Obama did something,'" says Clarity partner John Hagner. Their response? "We have to do something." —*Sasha Issenberg*



Goldman Sachs Employees have given

\$79,600

to Marco Rubio, an amount that may grow: Joseph Wall, a vice president for government affairs for Goldman in Washington, is Rubio's top campaign bundler.

Google see Public Opinion

Graham, Lindsey (R) "The party's over, to all the dictators. Make me commander-in-chief, and this crap stops." Oct. 28 GOP debate



Guns The Supreme Court will decide by June whether some people convicted of misdemeanor domestic violence should be allowed to possess firearms.

H

Health Care Federal actuaries predict that prescription drug spending will increase by 4.5 percent in 2016.

Huckabee, Mike (R) "I do not want to walk my five grandkids through the charred remains of a once-great country called America." Oct. 28 Republican debate

I

Immigration At least 680,000 people who registered under President Obama's program for undocumented immigrants brought to the U.S. as children would be at risk of deportation if his successor reverses the policy.

Inflation Economists surveyed by Bloomberg say U.S. inflation will hover at 1.9 percent in 2016.

Interest Rates Traders are anticipating a Federal Reserve rate increase in December, which would help savers but may crimp the housing market ahead of the election.

J

Jindal, Bobby (R) "I think we have a chance to rescue the idea of America, but if we don't do it now, four years will be too late." Oct. 28 Republican debate



K

Kasich, John (R) "We need to send power, money, and influence, the welfare department, the education department, job training, infrastructure, Medicaid, all of that, out of Washington back to the states." Oct. 28 GOP debate



L

LGBT Activists in Michigan will begin collecting signatures in early 2016 to introduce a constitutional amendment barring LGBT discrimination.

M

Marijuana Napster co-founder and former Facebook President Sean Parker is sponsoring a November ballot initiative to legalize marijuana in California and subject it to a 15 percent sales tax.

O

Obama, Barack

More Popular Than Reagan!

The president will hit the road for Democrats in 2016—his legacy depends on it

In 2014, President Obama was a ghost. He spent the last weeks before the midterms at the White House, out of sight as Democrats ran away from his record. In 2016 he'll have a triumphant return to the campaign trail. Surveys show he's regained his position as a powerful pitchman within his party: According to a Gallup poll taken in mid-October, his 83 percent job approval rating among Democrats is higher than Ronald Reagan's 79 percent among Republicans at the same point in his presidency. (His approval rating among all adults was 46 percent, compared with 51 percent for the Gipper.) "President Obama has both the unique ability and unique credibility to frame the stakes in the race that will be motivating to Democrats," says Geoffrey Garin, a Democratic pollster who was a senior strategist for Hillary Clinton's **P104** 2008 campaign and now works for the pro-Clinton super PAC Priorities USA. In addition to seeking to energize voters on behalf of his party's presidential nominee, he'll campaign for Senate and House candidates, according

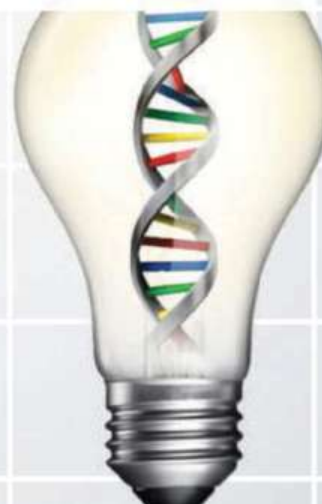
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to a Democratic strategist familiar with the administration's planning.

It's a marked departure from the experience of Obama's predecessors. Bill Clinton was sidelined by Vice President Al Gore's campaign in 2000, in part because of his affair with White House intern Monica Lewinsky. George W. Bush was kept in the background in 2008 to avoid stirring up voters angry over the Iraq War and his handling of Hurricane Katrina and the economy.

Obama carries into the campaign season a record of executive actions that address the concerns of key Democratic constituencies. That includes orders protecting undocumented immigrants from deportation, **P104** regulating carbon emissions, opening diplomatic relations with Cuba, and establishing rules for federal contractors that advance gender pay equity and prohibit discrimination against gays.

Securing a Democratic successor would help ensure those policies remain in place. "In the last year, he's only strengthened in his ability to rally the Democratic base and Democratic-leaning independents," says Guy Cecil, executive director of Priorities USA and former executive director of the Senate Democrats' national campaign arm.

Obama appears to be enjoying the prospect of another campaign. "About a year and a half ago people were saying I was a lame duck," he joked at an Oct. 27 fundraiser in Chicago. "We've been flapping our wings a lot."

—Mike Dorning

O'Malley, Martin (D) "We have firmly secured third place in this race." Oct. 31, at a campaign stop in Iowa

Oregon A law going into effect on Jan. 1 automatically registers residents getting driver's licenses to vote. It will add an estimated

300,000

voters to state rolls, a 14 percent increase.

P

Pataki, George (R) "One of the things that troubles me about the Republican Party is, too often we question science that everyone accepts." Oct. 28 Republican debate

Paul, Rand (R) "There's nothing free. It just means somebody else is gonna pay for it." Oct. 30 interview with an Iowa radio show

Polls Gallup—which has been polling presidential elections since 1936—won't conduct presidential primary surveys in 2016. Editor-in-Chief Frank Newport says the organization may not do head-to-head polling in the general election, either.

Public Opinion

Google Will Tell Us What We're Thinking

Its real-time trending data is a window into the national state of mind

Traditionally, the only way for campaigns to know what voters thought was to ask them. This year, Google is turning the tables, by publicizing the questions Americans are asking about candidates. "The data gives you incredible insight," says Simon Rogers, data editor at Google News Lab. —Tim Higgins

Top questions on Google about 2016 candidates on Nov. 4

- Jeb Bush**
- 1 How old is Jeb Bush?
 - 2 What is Jeb Bush's full name?
 - 3 How tall is Jeb Bush?
- Ben Carson**
- 1 What religion is Ben Carson?
 - 2 Who is Ben Carson?
 - 3 Where is Ben Carson from?
- Chris Christie**
- 1 Is Chris Christie still running for president?
 - 2 How old is Chris Christie?
 - 3 How much does Chris Christie weigh?
- Hillary Clinton**
- 1 How old is Hillary Clinton?
 - 2 What happened with Hillary Clinton and Benghazi?
 - 3 How is Hillary Clinton doing?
- Ted Cruz**
- 1 Where was Ted Cruz born?
 - 2 How old is Ted Cruz?
 - 3 What did George Bush say about Ted Cruz?
- Carly Fiorina**
- 1 What happened to Carly Fiorina?
 - 2 How old is Carly Fiorina?
 - 3 Where is Carly Fiorina today?
- Lindsey Graham**
- 1 Is Lindsey Graham still running?
 - 2 Who is Lindsey Graham?
 - 3 Is Lindsey Graham married?
- Mike Huckabee**
- 1 Is Mike Huckabee still running for president?
 - 2 Who is Mike Huckabee?
 - 3 How old is Mike Huckabee?
- Bobby Jindal**
- 1 Is Bobby Jindal still running for president?
 - 2 What nationality is Bobby Jindal?
 - 3 Where was Bobby Jindal born?
- John Kasich**
- 1 Where will Kasich be this week?
 - 2 How old is John Kasich?
 - 3 When was John Kasich elected?
- Martin O'Malley**
- 1 How old is Martin O'Malley?
 - 2 Is Martin O'Malley a Democrat?
 - 3 Where is Martin O'Malley from?
- George Pataki**
- 1 Who is George Pataki?
 - 2 How tall is George Pataki?
 - 3 What is George Pataki's platform?
- Rand Paul**
- 1 Who is Rand Paul?
 - 2 How old is Rand Paul?
 - 3 Is Rand Paul running for president?
- Marco Rubio**
- 1 How old is Marco Rubio?
 - 2 Who is Marco Rubio?
 - 3 Where is Marco Rubio from?
- Bernie Sanders**
- 1 How old is Bernie Sanders?
 - 2 Who is Bernie Sanders?
 - 3 Who played Bernie Sanders on SNL?
- Rick Santorum**
- 1 Is Rick Santorum still running for president?
 - 2 How old is Rick Santorum?
 - 3 Where does Rick Santorum live?
- Donald Trump**
- 1 How old is Donald Trump?
 - 2 How much is Donald Trump worth?
 - 3 Will Donald Trump be our next president?

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see P. 97

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RACIAL PROFILING

R

Racial Profiling The Department of Justice is expected to release the results of its civil rights investigation into police practices in Baltimore, triggered by the April 19 death of a black man, Freddie Gray, from injuries sustained while in police custody.

Reproductive Rights

Roe v. Kennedy

It may be up to one justice to decide an important abortion case

Beginning in July, anti-abortion activists released videos that appeared to show officials at Planned Parenthood Federation of America, the largest provider of abortions in the U.S., discussing the sale of fetal tissue. In response, Republicans in Congress threatened to shut down the government unless federal funding to the group was eliminated. Trying to squelch the controversy, Planned Parenthood announced in mid-October it would stop accepting reimbursement for the cost of providing fetal tissue to medical researchers who use it to develop vaccines and study degenerative diseases.

Abortion hasn't played a starring role in U.S. politics since 2007, when the Supreme Court upheld the federal ban on "partial birth" abortions, striking down claims that the law infringed on women's health-care rights. This term, the justices are likely to hear a challenge from Texas, where abortion providers are attacking a 2013 law that threatens to reduce the number of clinics offering the procedure to a dozen from about 40 in the state. (Michael Bloomberg, founder of Bloomberg LP, the parent of *Bloomberg Businessweek*, supports Planned Parenthood through his personal philanthropy.)

Legal observers predict that if, as expected, the high court agrees to hear the Texas case, it would lead to the most important abortion ruling since 1992, when the court upheld the core of *Roe v. Wade*, the 1973 case establishing a constitutional right to abortion. Conceivably, the Texas case could lend conservatives an opportunity to try to kill off *Roe* altogether. A decision would likely come in June, just as presidential general election campaigns get under way.

Two provisions of the Texas law are at issue. One

Critically, the lower court declined to inquire whether the regulations promoted women's health or were just a means to limit the availability of abortion. Abortion restrictions ought to stand if "any conceivable rationale exists" for their enactment, the Fifth Circuit said. This deference to state lawmakers conflicted with rulings from at least two other federal appellate courts, which held in separate cases that judges ought to consider the impact of medical regulations that constrict access to abortion.

Texas defends the law in court as a bid to raise health standards and protect women. But former Governor Rick Perry made his real motive clear at an anti-abortion rally in Austin months before signing the bill. "My goal, and the goal of all of us who are gathered here today, is to make abortion at any stage a thing of the past," he said. "The ideal world is one without abortion. Until then, we will continue to pass laws to ensure that they are as rare as possible."

Chief Justice John Roberts and Justices Antonin Scalia, Clarence Thomas, and Samuel Alito are almost certain to vote to uphold the Texas restrictions. Liberal Justices Ruth Bader Ginsburg, Stephen Breyer, Sonia Sotomayor, and Elena Kagan will vote to strike down the state curbs as impinging on women's rights. The decision likely rests with Justice Anthony Kennedy, a Reagan appointee. In 1992 he formed a centrist troika with then-Justices Sandra Day O'Connor and David Souter to formulate the "undue burden" standard. How he'd apply that vague standard in the Texas case is anyone's guess. It's even possible that he'd consider joining the Roberts wing and use this case to get rid of *Roe*—a risk that pro-choice advocates knew they were taking when they brought the case to the high court.

—Paul M. Barrett

Rubio, Marco (R) "I'm against anything that's bad for my mother." Oct. 28
Republican debate

Russia

Putin's October Surprise

A clash could create headaches for candidates

During the 2012 presidential campaign, President Obama ridiculed Republican Mitt Romney for asserting that Russia remains the biggest enemy of the U.S. "The 1980s are now calling to ask for their foreign policy back," Obama said during one debate. Four years later, Russian President Vladimir Putin has emerged as one of Obama's most frequent antagonists. Putin's decision to begin airstrikes in Syria on behalf of President Bashar al-Assad prompted the White House to announce in October that it would send special operations forces to help rebels who've waged a four-year civil war against the regime—reversing Obama's repeated insistence that he wouldn't put American boots on the ground.

A pivotal Russian offensive on Assad's behalf—especially one that results in a confrontation between U.S. and Russian forces—may put Hillary

A DECISION WILL COME JUST AS THE ELECTION HEATS UP

requires abortion doctors to have admitting privileges at a nearby hospital. The other obliges abortion clinics to meet the same standards for equipment and staffing as nonspecialized ambulatory surgical centers. This past June, a three-judge panel of the U.S. Court of Appeals for the Fifth Circuit upheld the Texas statute, saying that while these requirements would force clinics to close, this didn't constitute "an undue burden" on women's right to obtain an abortion—the constitutional standard established by the Supreme Court in 1992.

CONT. →

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RUSSIA

Clinton, Obama's former secretary of state, on the defensive, but it would cause greater heartburn for Republicans. The party remains split between those who want to avoid intervention and neoconservatives who favor it. "The challenge on the Republican side is: What the heck is Republican foreign policy?" says Jon Alterman, director of the Middle East Program at the Center for Strategic & International Studies, a Washington think tank. —*Mike Dornig and Henry Meyer*

S

Sanders, Bernie (D) "You can have all of the growth that you want, and it doesn't mean anything if all of the new income and wealth is going to the top 1 percent." Oct. 13 Democratic debate

Santorum, Rick (R) "You elect me, we will get American workers on the side of the Republican Party, and we cannot be stopped if we do." Oct. 28 Republican debate

Super PACs The groups must report their fundraising—and spending—for the last months of 2015 by Jan. 31, 2016, the day before the Iowa caucuses.

Supreme Court see Guns, Reproductive Rights, Unions

T

Trump, Donald (R) "It's not about being a celebrity. It's about having a view that's captivating the people in this country, because they're tired of being taken advantage of." Oct. 30 rally at the Nugget Casino in Sparks, Nev.

U

Unions

The Teacher Who Could Gut Unions

Rebecca Friedrichs's challenge to mandatory fees could reduce labor's political clout

A Supreme Court decision coming by the end of June could be devastating for organized labor. The case, *Friedrichs v. California Teachers Association* (CTA), challenges a 1977 ruling allowing public-sector unions to charge nonmembers covered by union contracts mandatory fees to pay for the costs of collective bargaining. The lead plaintiff, Rebecca Friedrichs, is an elementary school teacher. She claims that being forced to pay money to California's politically powerful and overwhelmingly Democratic teachers' union as a condition of her employment violates her First Amendment rights.

Conservatives want the court to ban the mandatory fees. That would create a crisis for organized labor, about half of whose members are in the public sector; dues and fees made up \$174 million of CTA's reported \$186 million in revenue in 2013. It could also cause trouble for Democrats, who depend on union support during elections. CTA reported spending \$211 million on campaigns and lobbying from 2000 to 2009, according to Friedrichs's suit, including \$26 million to oppose a school-voucher proposition.

XENOPHOBIA

The Supreme Court has already said government workers can't be required to fund union activities if they're unrelated to collective bargaining. But the plaintiffs argue that collective bargaining is inherently political when the government is the employer. "One of the things people fight about in politics is, should you spend more money on teachers or police?" says Ronald Cass, a former dean of Boston University School of Law, who co-wrote an amicus brief in support of Friedrichs.

Unions' best hope of winning rests with an unlikely ally: Antonin Scalia. He wrote in a 1991 case that, because the government requires public-sector unions to provide equal representation to nonmembers, it has an interest in making sure that service is paid for. "Where the state imposes upon the union a duty to deliver services, it may permit the union to demand reimbursement for them," he wrote.

Scalia has also argued that the government has much more leeway to exercise control over its employees than over private citizens, a view that could help unions. "Private citizens perhaps cannot be prevented from wearing long hair, but policemen can," he wrote in a 1990 dissent involving public employees in Illinois.

Scalia brought up police officers' First Amendment rights again last year in a union fees case involving home-health-care workers supported by Medicaid. In oral arguments, Scalia posited a discontented cop who insisted on meeting over and over with the police commissioner to bug him for a raise: "The commissioner finally is fed up and tells his secretary, I don't want to see this man again—has he violated the Constitution?" In that case, Scalia ended up joining the 5-4 majority opinion, which found that "quasi-public employees," like home aides, can't be required to pay union fees.

The biggest public-sector unions, including the American Federation of State, County & Municipal Employees (AFSCME), are already canvassing workers, asking them to become dues-paying members before the court rules on the case. Even pro-union workers may be tempted by the chance to have their representation for free, says Lee Saunders, president of AFSCME. "That's going to be a hard choice for some people." —*Josh Eidelson*

V

Voting Rights see Gerrymandering

W

Wages Workers making the minimum wage in 12 states and the District of Columbia will get raises. D.C. will see the highest rate,

\$11.50 an hour.

XYZ

Xenophobia The U.S. will increase refugee caps to 100,000 per year starting in October 2016 for asylum seekers from all countries, though human-rights groups are pushing for the U.S. to take that many from Syria alone. A Republican state legislator in South Carolina has called for hearings on resettlement to address concerns about terrorists posing as asylum seekers.

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REPORTING FOR DUTY



**BOB WOODRUFF
FOUNDATION**
Helping heroes on the homefront.



**AS MORE AND MORE VETERANS TRANSITION
BACK TO CIVILIAN LIFE, SOME CORPORATIONS
ARE STEPPING UP TO OFFER SUPPORT**

Between 2011 and 2016, more than 1 million service members will transition from active duty back to civilian life. What seems like it should be a simple task can be overwhelming for veterans, and sometimes seem almost as challenging as deployment. "Transition is not a single act of leaving the military, getting a job and living happily ever after," says Lewis Runnion, Bank of America's Public Policy Director of Military Affairs. "It's a process. It takes time, and that time can vary among service members and families."

"What makes the transition even harder is if these soldiers have wounds—either physical, or hidden," says Bob Woodruff, a journalist who after being seriously injured in Iraq went on to launch the Bob Woodruff Foundation,

which has invested nearly \$30 million in programs serving injured veterans and their families. On Nov. 10, the foundation will host its ninth annual Stand Up for Heroes event, featuring celebrities including Bruce Springsteen, Seth Meyers, Jon Stewart and John Oliver. The second annual Dine Out for Heroes, the foundation's expanded five-night initiative with some of New York City's top restaurants, runs Nov. 9–13.

As important as fundraisers and awareness events are to aiding civilian transitions, Runnion and Woodruff agree that men and women leaving military service need another key piece of assistance: mentorship. "They're not looking for handouts; they're looking for advice," says Runnion. "They want to be held accountable, and allowed to perform."



As an Army logistics officer, Lacy Miske moved a lot of precious cargo. Today, it's not so different.

Over the next five years, more than a million service members will make the transition from military to civilian life. We believe it's our job to help connect them with the jobs, financial education and comprehensive support they'll need to thrive here at home. Case in point: Lacy Miske, who used logistics and managerial skills learned in the Army to transition into a career at Bank of America, where she helps oversee the secure delivery of cash to our network of ATMs and financial centers.

See Lacy's story at bankofamerica.com/militarysupport

Bank of America 

Life's better when we're connected®

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For that reason, Bank of America has been working to provide the necessary guidance and opportunities to veterans since 1920. Veteran employment and recruiting services are a critical part of the financial institution's strategy: In the past five years, Bank of America has hired more than 8,000 veterans, and it has committed to hiring 10,000 more over the next several years.

Not only is this approach the right thing to do, Runnion says it's a smart business decision: "I can hire a man or woman from active duty, and they have a wealth of leadership experience and the ability to get a task accomplished. They're a great addition to our workforce. Thirty percent of Americans are eligible to serve, and 1 percent or less actually serve. I would argue that those are pretty special people, and I want them on my team."

Although extremely qualified in terms of leadership, discipline and critical thinking, veterans may be missing some of the skills required for succeeding in the financial sector. To help them adapt, Runnion and his team created the Veteran's Associate Program, a 10-week rotational program in New York City designed to give former military personnel on-the-job training in BofA's Global Banking & Markets business. After the first rotation, all seven participants were hired outright. "It took between six to nine months to get their financial acumen up, but they had real-life leadership experience that we couldn't replicate at the bank," Runnion says.

Consider one of the graduates: a scout sniper in the Marine Corps and a graduate of a small college in Utah—one that Bank of America's recruiters may not have even thought to approach. "A large part of his military role was battlefield reconnaissance, which means he's really an analyst," says Runnion, who brought the former sniper in on the analyst track. Managers are taking notice. Two and a half years later, similar programs have been established in other lines of business, including Global Technology and Operations, and Consumer Banking.

Of course, employment is just one part of the transition, and Bank of America has installed programs to help veterans with education, wellness and more. The company has also donated nearly 2,000 properties to nonprofits that provide homes to military veterans and first responders. "Transitioning is a symbiotic relationship, and we want to help with all the pieces," Runnion says.

CREATING A ROADMAP

A number of companies continue to set an example by hiring and supporting former service members. To make it easier to connect employers with qualified veterans, USAA recently partnered with the U.S. Chamber of Commerce Foundation's Hiring Our Heroes to launch Employer Roadmap (employerroadmap.org).

"It's a comprehensive tool that helps employers who want to develop veteran hiring programs or improve existing ones," says Eric Engquist, an Army veteran and Assistant Vice President, Military Transitions at USAA. "It includes customizable, interactive hiring action plans to recruit and then empower that employee to become a productive member of the company."

The Employer Roadmap includes military spouses, too. "Oftentimes, they find themselves isolated from family and their traditional support network," Engquist says. "They, too, have built

significant resiliency capabilities, porting jobs and taking on a role that we call the Chief Financial Officer of the household. So they have the ability, once they are transitioned with the veteran and settling into a community, to bring those skills to the forefront."

As unemployment rates among veterans fall (the numbers for the latest generation of veterans routinely run below 7 percent), USAA nevertheless realizes there's no one-size-fits-all approach to hiring. "Organizations of different sizes have different needs," Engquist explains. "Small companies are challenged with how to find vets, how to attract them and how to assess them. That's the real value that the Employer Roadmap provides: Employers can customize a plan and find veterans that will be best suited for their industry or sector."

Earlier this month, USAA—again, in conjunction with Hiring Our Heroes—released its 2015 Best Places for Veterans rankings. "These lists were created to help veterans transition from the military to civilian life," explains Engquist. This year's lists highlight the best places in the nation for veterans to pursue entrepreneurship, education or a career, with Asheville, N.C., Tuscaloosa, Ala. and Oklahoma City topping each respective category.

This list, along with USAA's other transition resources such as its Separation Checklist and Separation Assessment Tool, can help service members map out their financial plan well in advance of transition.

"We're not looking to replace the military separation programs—we're

looking to augment them," says Engquist. And preparations can't be left until the final months of service: "Planning needs to start much earlier than veterans traditionally afford themselves. We engage our service members 18, if not 24, months prior to a potential separation so that they can do the things necessary to be financially prepared."

Military service and transitioning come with plenty of uncertainties. Yet Bob Woodruff predicts one constant: "We're going to have wars going on—either underground or out in the spotlight—for a long time. There are always going to be conflicts for our country that are being served by our veterans." Which means corporate support will always be necessary. — *Lisa Freedman*

2015 BEST PLACES FOR VETERANS



USAA's list, created in conjunction with Hiring Our Heroes, highlights the top spots for veterans to pursue entrepreneurship, education or a career.

ENTREPRENEURSHIP


1. Asheville, N.C.
2. Sarasota, Fla.
3. West Palm Beach, Fla.

EDUCATION

1. Tuscaloosa, Ala.
2. Lynchburg, Va.
3. Ann Arbor, Mich.

CAREERS

1. Oklahoma City, Okla.
2. Pittsburgh, Pa.
3. Houston, Texas



WE HIRE REAL HEROES



At USAA, hiring veterans and military spouses is part of our origin story – and our mission success.

Consistently ranked as one of America's top military friendly employers, more than 10,000 veterans and military spouses have joined our team since 2006. We believe the skills and experiences earned in service to our country bring a unique value to the workplace that is good for business.

Learn how to start the journey to hiring our nation's heroes by visiting **EmployerRoadmap.org**.

IN COLLABORATION WITH
HIRING OUR HEROES
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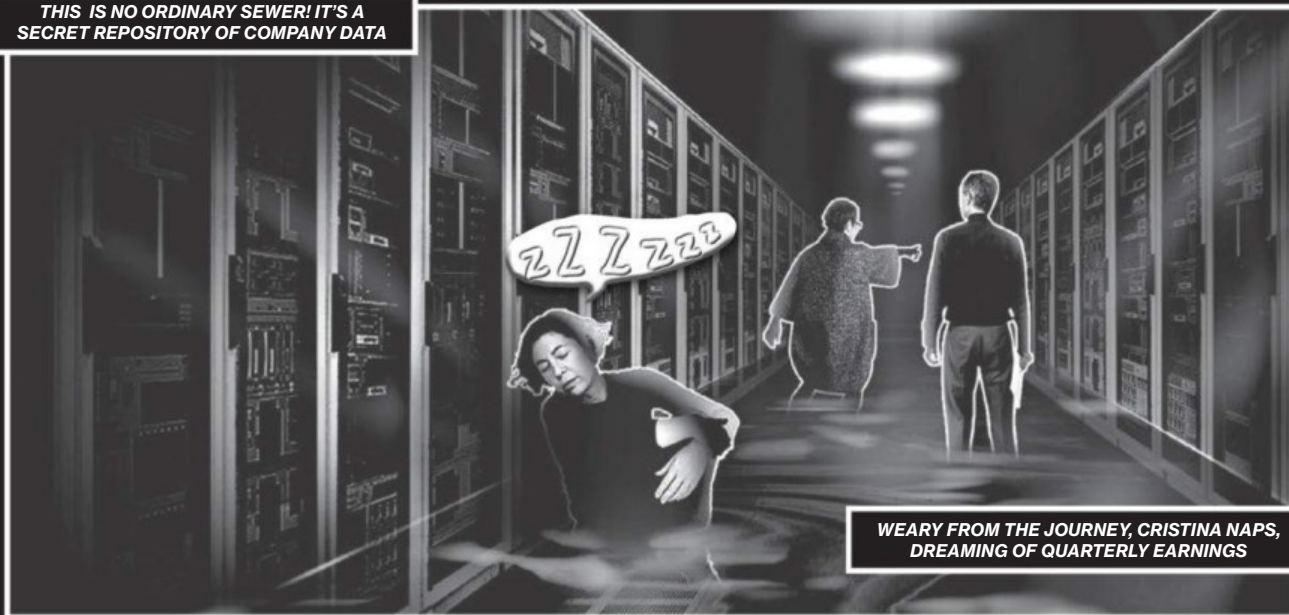
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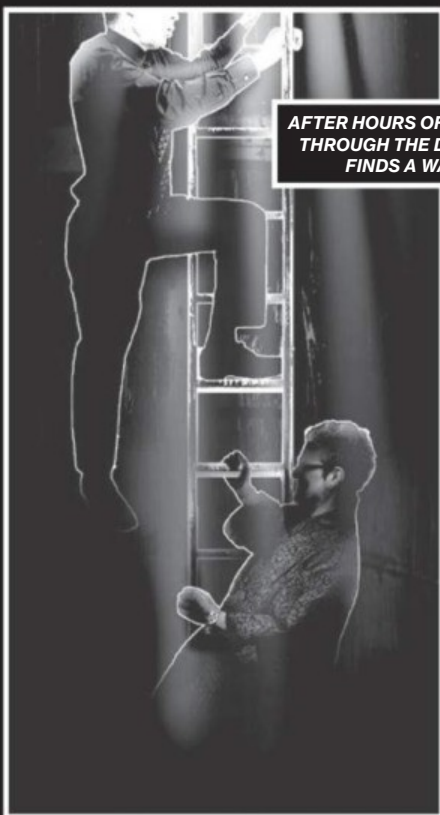
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WEARY FROM THE JOURNEY, CRISTINA NAPS,
DREAMING OF QUARTERLY EARNINGS



AFTER HOURS OF NAVIGATING
THROUGH THE DATA, PETER
FINDS A WAY OUT



AS THEY EMERGE, A MIRACLE!



WITHIN LIES THE DEVICE THAT
WILL SEND THE MAGAZINE BACK
IN TIME TO THE YEAR 2015

Continued on p130

DATA DIVE

50 COMPANIES TO WATCH

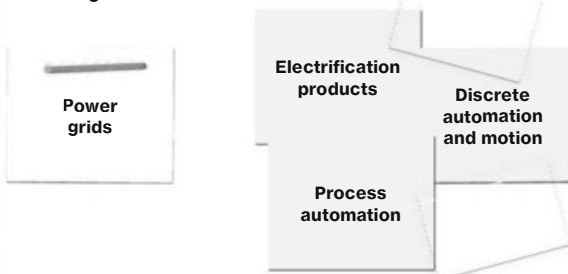
For the companies in these pages, 2016 is likely to be a momentous year. We asked the analysts at Bloomberg Intelligence, who study 4,000 stocks, to identify companies that face unusual challenges or have standout products or technology. They considered revenue growth, margins, market share, and debt, as well as other factors, and came up with a list of 50 companies worth watching. Among them are giants such as Microsoft, which is counting on Windows 10 to expand its mobile footprint, and ConAgra Foods, which is trying to warm up sales of such heritage brands as Chef Boyardee and Slim Jim, even as Americans' appetite for processed foods is waning. Some lesser-known names also stand out: Essex Property Trust is riding the wave of newly employed millennials moving into rental apartments on the West Coast, while ITV, the broadcaster that produced *Downton Abbey*, is likely to get a boost from a recovery in British ad spending.

INDUSTRIALS

ABB

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-8.2%	-7.4%	\$42.69b	\$37.89b	-11.9%

The Zurich-based manufacturer recently reorganized its units and placed the underperforming power grids business under review, which could result in its spinoff or sale.

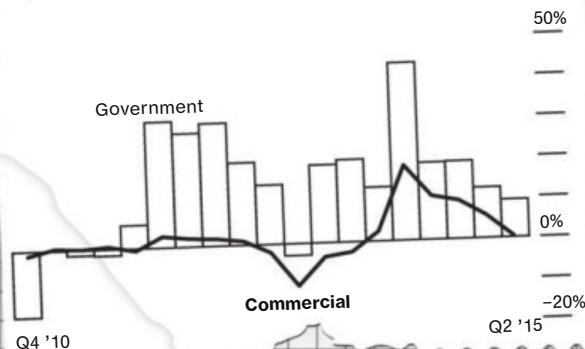
ABB reorganizes

HEALTH CARE

AETNA

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
4.9%	12.2%	\$54.64b	\$59.83b	44.7%

With its proposed \$37 billion purchase of Humana, expected to close in the second half of 2016, Aetna is poised to become the largest provider of Medicare coverage in the U.S. The deal will boost the company's government business, which has seen stronger growth than its commercial side.

Growth in health-plan premium revenue

Figures were compiled or estimated by Bloomberg's Global Data division, unless otherwise noted. All growth numbers are for one year. One-year total return is through Sept. 15. Sales figures are drawn from the most recent interim reports as of Sept. 15; total assets are from the most recent company filings as of Sept. 15. N/A = Not available, N/M = Not meaningful.

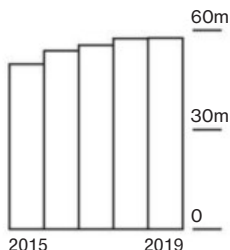
TECHNOLOGY

APPLE

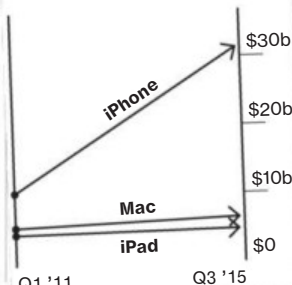
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
27.6%	41.6%	\$273.15b	\$224.34b	16.4%

The iPhone, Apple's most important product, appears to be reaching saturation in the world's biggest markets, including China. To keep growing, the company will need hits in new categories. Smart wearables such as the Apple Watch offer fresh opportunity.

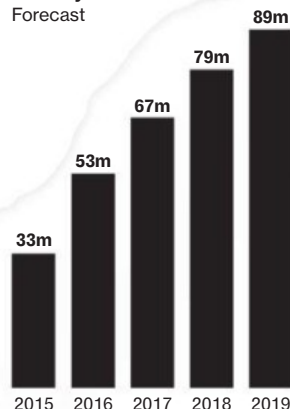
China iPhone unit shipments
Forecast



Apple revenue



Smart wearables shipments,
industrywide
Forecast



DATA: IDC

ENERGY

BANKERS PETROLEUM

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-42.8%	-96.2%	\$1.26b	\$387.2m	-66.6%

The Canadian exploration and production company has aggressively pared debt, which leaves it better positioned than many of its peers to benefit from a recovery in oil prices.

Q2 '14 Oil price

\$86.68

Net debt

\$92.82m

Q2 '15

\$47.99

\$41.12m

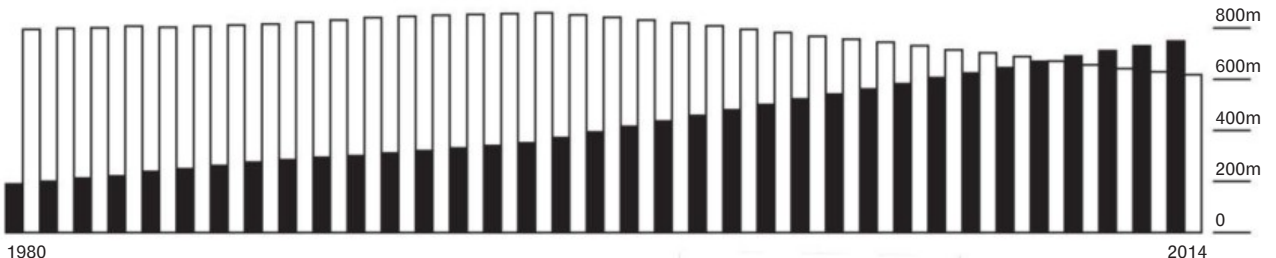
PACKAGED FOOD

BIOSTIME INTERNATIONAL

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-11%	-38.2%	\$1.07b	\$728.2m	-47.5%

China's urbanization

■ Urban population
□ Rural population



DATA: NATIONAL BUREAU OF STATISTICS OF CHINA

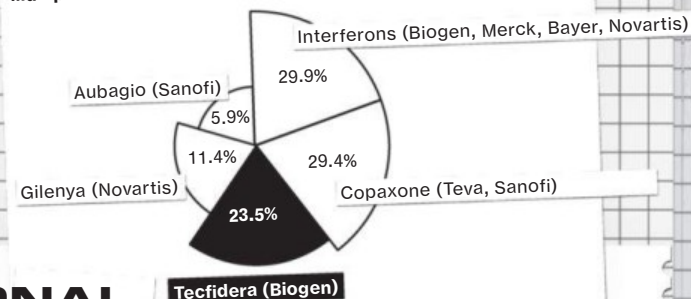
PHARMACEUTICALS

BIOGEN

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
7.8%	14.9%	\$16.76b	\$10.3b	-0.1%

Tecfidera, an oral treatment for multiple sclerosis, has been fueling Biogen's growth since it was approved by the Food and Drug Administration in 2013. As sales level off, Biogen is looking for new blockbusters.

Multiple sclerosis U.S. prescriptions

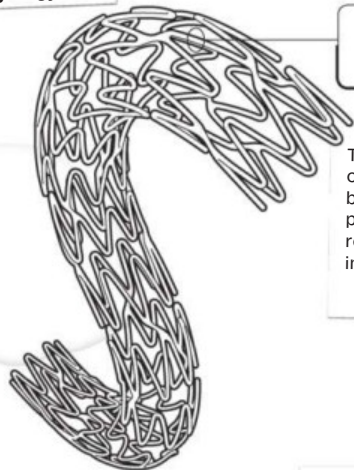


MEDICAL DEVICES

BOSTON SCIENTIFIC

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
1.3%	7.9%	\$17.12b	\$7.34b	37.9%

Boston Scientific is set to have a banner 2016 as it launches a slew of products, including an MRI-safe pacemaker, a defibrillator that doesn't require a lead attached to the heart, and the Synergy stent.

Synergy stent

74 microns
thick
4-micron
coating

The stent is covered with a bioabsorbable polymer that reduces inflammation.

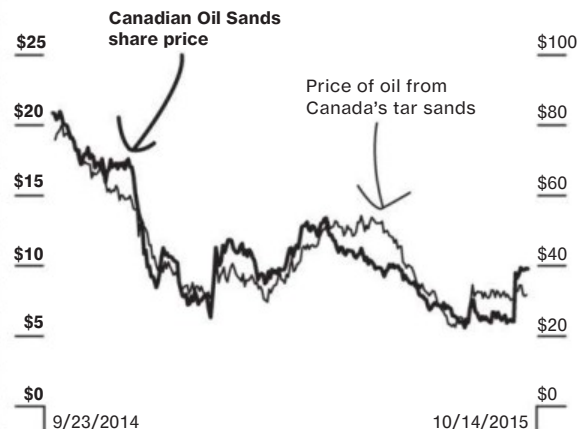
ILLUSTRATION BY CHRIS PHILPOT

ENERGY

CANADIAN OIL SANDS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-39%	N/M	\$8.14b	\$2.53b	-70.9%

The company is a bellwether for Alberta's tar sands. Investors will be watching next year for evidence that the industry's capital-intensive process of extracting petroleum has a future in a world of low oil prices.

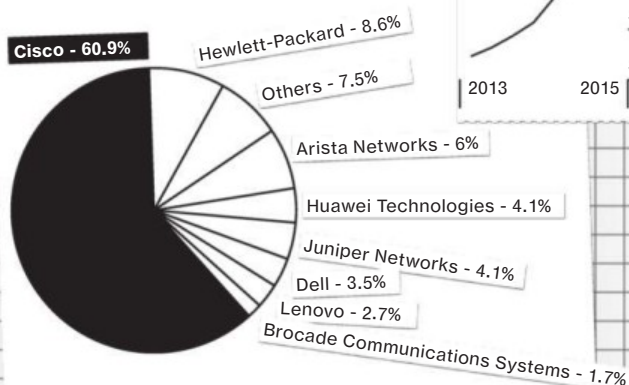


TECHNOLOGY

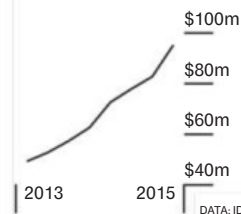
CISCO SYSTEMS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-3.9%	4.2%	\$113.48b	\$49.16b	6.8%

Networking hardware is fast becoming a commodity as Big Data companies such as Facebook and Amazon increasingly order generic "white-box" routers and switches directly from suppliers in Asia. This puts Cisco, the dominant player in the branded switch market, under pressure to move into software.

Data center switching market share

DATA: IDC

Market for white-box switches Sales

\$100m

\$80m

\$60m

\$40m

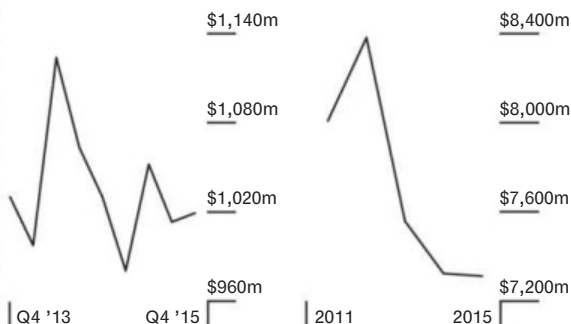
DATA: IDC

PACKAGED FOOD

CONAGRA FOODS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-1.6%	2.1%	\$15.83b	\$14.93b	32.9%

The packaged-foods supplier is getting out of the low-margin business of making private label brands for supermarkets and focusing on reviving its own consumer brands: Chef Boyardee, Hunt's, Slim Jim.

ConAgra private label sales**ConAgra brands sales**

\$1,140m

\$8,400m

\$1,080m

\$8,000m

\$1,020m

\$7,600m

\$960m

\$7,200m

HEALTH CARE

CVS HEALTH

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
8.4%	14.8%	\$74.67b	\$145.58b	26.8%

16%

The rate at which CVS expects the market for specialty pharmaceuticals to grow through 2018. The segment, which includes expensive drugs for cancer, multiple sclerosis, and rheumatoid arthritis, is an important line of business for the company following its \$12.7 billion acquisition of Omnicare in May.

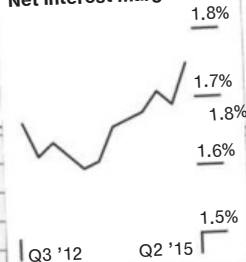
FINANCIALS

DBS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
9.3%	6.7%	\$326.75b	\$10.2b	-1.5%

An increase in U.S. interest rates would lead to higher rates in Southeast Asia and could benefit the Singapore bank by widening the gap between what it pays to borrow and what it charges to lend.

Net interest margin



FINANCIALS

DEUTSCHE BANK

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
10.4%	7.7%	\$1,889.51b	\$57.75b	0.1%

The German bank faces legal challenges, including an investor lawsuit and an investigation by the U.S. Department of Justice over mortgage-backed securities it sold before the credit crisis.

Litigation expense



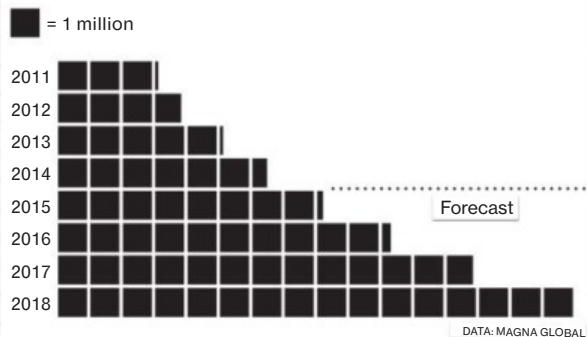
ENTERTAINMENT

DISNEY

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
7.5%	17.2%	\$87.37b	\$51.34b	16.9%

The pay-TV bundle has begun a slow slide in the U.S. as more consumers choose so-called over-the-top standalone streaming services such as Netflix and Hulu. Disney, one of the biggest cable programmers, will have to find new ways to reach viewers.

Homes using standalone streaming services



Change in ratings over the past year at some top Disney networks

ABC

+6.7%

ESPN

-1.5%

ABC Family

-7%

Disney Channel

-11.2%

DATA: NIELSEN

ENTERTAINMENT

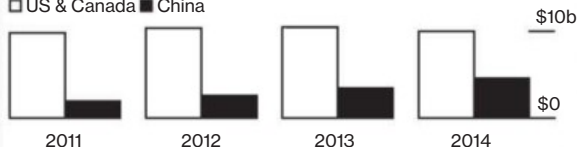
DREAMWORKS
ANIMATION SKG

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
19.6%	49.2%	\$2.01b	\$752.4m	-18.1%

Kung Fu Panda 3, coming out in March, could be a huge hit in China, the world's No. 2 movie market. The animated film is co-produced by DreamWorks and Chinese investors, making it exempt from Beijing's import quotas on foreign films.

Box office

■ US & Canada ■ China



DATA: MOTION PICTURE ASSOCIATION OF AMERICA

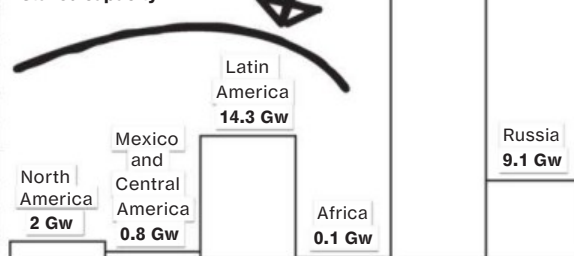
ENERGY

ENEL

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-2.1%	1.3%	\$183.4b	\$89.84b	-0.3%

The Rome-based electricity and gas company plans to boost investment in high-growth markets in the Americas and Africa by 48 percent through 2019 to offset declining demand for power in Europe.

Installed capacity



ENERGY

ENERGY TRANSFER
EQUITY

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-13.9%	102.2%	\$69.15b	\$50.44b	-12.7%

\$37.7B

Amount the Dallas-based company paid to acquire Williams Cos. in September. Williams, headquartered in Tulsa, operates the biggest pipeline out of the Marcellus Shale, where natural gas production continues to climb.

FINANCIALS

ESSEX PROPERTY
TRUST

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
22.3%	33.4%	\$12.05b	\$1.13b	21.2%

Apartment rents are rising—especially on the West Coast, where Essex is based—as the pace of young people entering the workforce has increased.

2016 apartment rent growth forecast

West

South

Midwest

Northeast

● Oakland

● San Francisco

● Seattle

● Denver, Phoenix, San Bernardino

● Orange County

● Las Vegas, San Diego
● Los Angeles

● Dallas, Houston
● Atlanta

● Austin

● San Antonio
● Fort Worth, Tampa
● Orlando

● Baltimore, Suburban Virginia

● Suburban Maryland

● Washington

● Minneapolis

● Chicago

● Detroit

● New York

● Boston

● North New Jersey
● Philadelphia

● Central New Jersey

5.2%

5%

4.8%

4.6%

4.4%

4.2%

4%

3.8%

3.6%

3.4%

3.2%

3%

2.8%

2.6%

2.4%

2.2%

2%

DATA: REIS

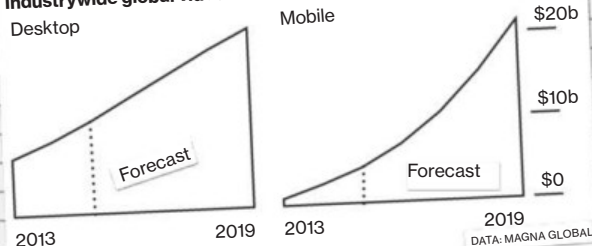
TECHNOLOGY

FACEBOOK

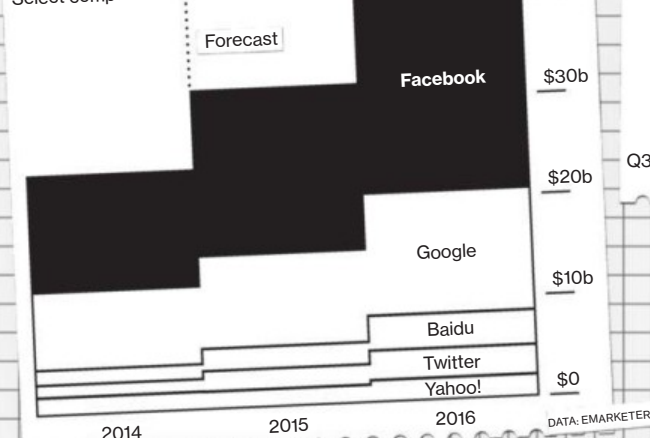
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
37.8%	16.9%	\$44.13b	\$14.64b	24.6%

Facebook is well positioned in the booming market for mobile ads.

Industrywide global video ad revenue



Worldwide mobile ad revenue



FINANCIALS

FANNIE MAE

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
N/A	-18.6%	\$3,225.4b	\$112.38b	-33.3%

FREDDIE MAC

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
N/A	12.6%	\$1,947.46b	\$66.41b	-35.2%

\$153B

Additional money sent to the U.S. Treasury by Fannie and Freddie since Congress, in 2012, mandated a sweep of profits from each of the mortgage buyers instead of a 10 percent dividend. A group of shareholders is challenging the change in court.

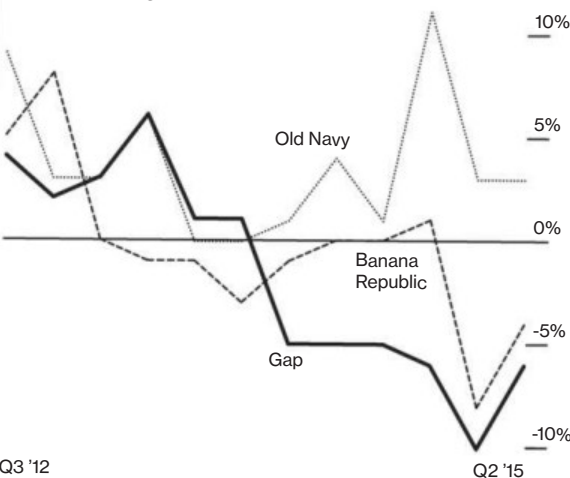
APPAREL

GAP

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-1.3%	-2.7%	\$7.29b	\$16.24b	-26.3%

Old Navy has been showing signs of life, but can the Gap brand and Banana Republic be revived?

Same-store sales



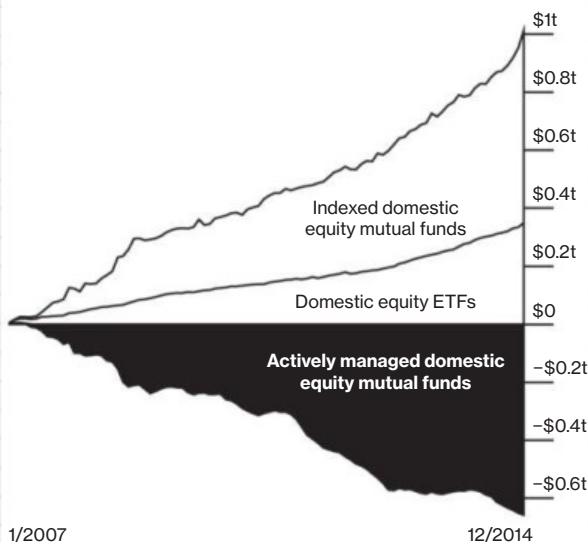
FINANCIALS

GOLDMAN SACHS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
4.8%	7.4%	\$859.88b	\$40.85b	3.2%

As investors continue an exodus from actively managed mutual funds, the investment bank is moving into exchange-traded funds—despite low management fees and stiff competition.

Cumulative cash flows, industrywide



DATA: INVESTMENT COMPANY INSTITUTE

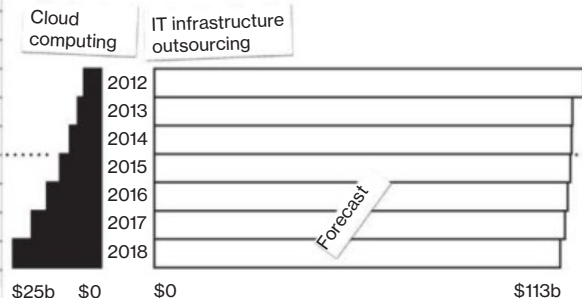
TECHNOLOGY

HEWLETT-PACKARD

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-6.6%	-3.1%	\$107.03b	\$106.05b	-23.6%

Companies' embrace of cloud computing is eroding demand for outsourcing IT infrastructure services, a key business for HP.

Global market for:



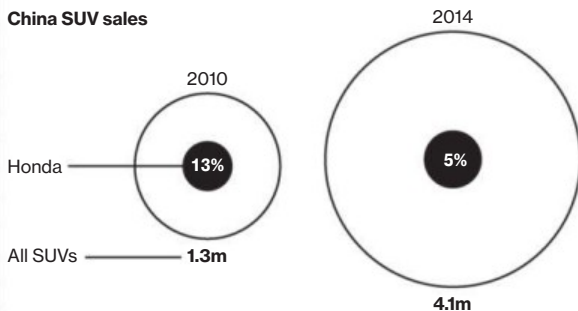
AUTO

HONDA MOTOR

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
15.4%	15.2%	\$154.75b	\$117.01b	2.7%

The Japanese automaker is losing ground in the battle for market share in China, where the supply of vehicles is beginning to outpace demand.

China SUV sales



DATA: CHINA ASSOCIATION OF AUTOMOBILE MANUFACTURERS

MEDICAL EQUIPMENT

ILLUMINA

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
20.9%	26.4%	\$3.7b	\$2.07b	22.4%

\$1,000

The cost of sequencing a human genome on Illumina's HiSeq X Ten system, launched in 2014. (It cost \$3 billion to decode the first genome more than a decade ago.) Illumina predicts sales of its top-selling gene-sequencing equipment will advance 20 percent or more in 2016.

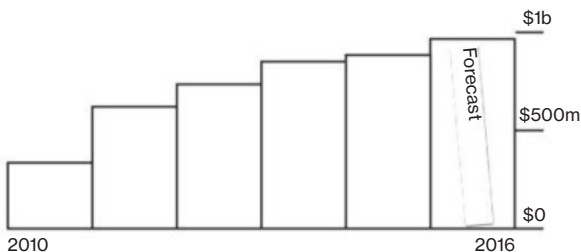
RETAIL

INTIME RETAIL

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
6.8%	-19.4%	\$4.41b	\$962.4m	25.1%

E-commerce powerhouse Alibaba acquired a 10.1% stake in this upscale Chinese department store chain in 2014 and has an option to increase its holding to 26 percent by mid-2017.

Intime's annual sales



MEDIA

ITV

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
13%	16.8%	\$4.68b	\$4.29b	20.7%

The British broadcaster of *Downton Abbey*, *Jekyll and Hyde*, and the Rugby World Cup will get a lift from the continued recovery in U.K. advertising spending, which in 2016 is projected to increase

5.5%

DATA: WORLD ADVERTISING RESEARCH CENTER

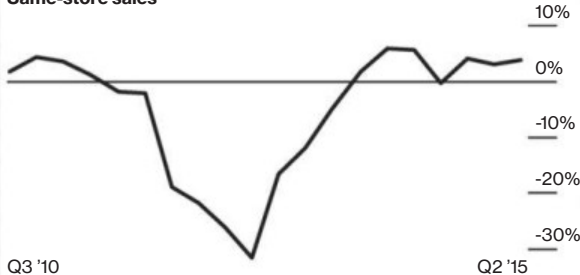
RETAIL

J.C. PENNEY

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
2.7%	53.3%	\$10.23b	\$12.39b	-10.3%

Sales at the fifth-largest U.S. department store operator have improved after collapsing in fiscal 2012. The company will need to grow 6 percent or more a year to reach its goal of restoring sales to 2011 levels by 2025.

Same-store sales



PACKAGED FOOD

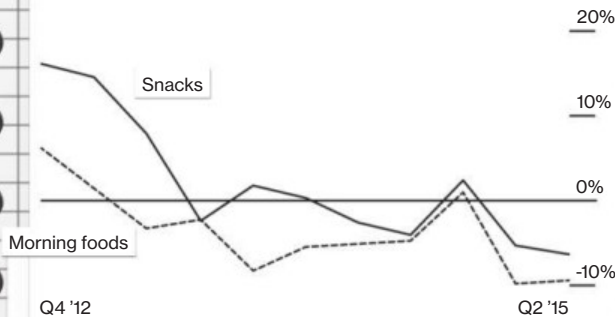
KELLOGG

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-6%	-7.8%	\$14.96b	\$14.21b	9.1%

A shift in eating habits is testing the century-old cereal brand. Consumers are spending less on packaged foods and more on fresh fruits, vegetables, dairy, and meat.

Industrywide sales

Year-over-year change

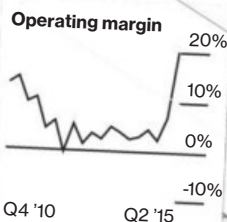


INDUSTRIALS

LOTTE CHEMICAL

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
20%	453.9%	\$9.3b	\$12.24b	59.3%

Lower oil prices will continue to buoy operating margins at the South Korean company, which has been adding capacity in petroleum-derived chemicals.



RETAIL

MACY'S

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-0.8%	3.9%	\$20.12b	\$27.9b	-1.9%

\$20B

Estimated value of Macy's real estate holdings, which include its Herald Square flagship store in Manhattan, according to Starboard Value, an activist investor that would like to see the retailer spin them into a separately traded REIT.

\$16.7B

Macy's stock market value

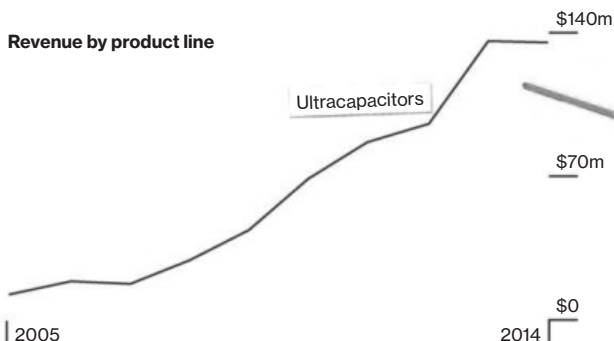
TECHNOLOGY

MAXWELL TECHNOLOGIES

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-16.4%	-2,350%	\$170.6m	\$167m	-31.8%

Maxwell is a leader in this nascent market for ultracapacitors. Its technology is being embraced by Ford and other vehicle makers.

Revenue by product line



Ultracapacitors

Capable of storing and discharging energy quickly and more efficiently than current batteries, ultracapacitors provide bursts of energy on demand and store excess power.

Standard battery



Ultracapacitor



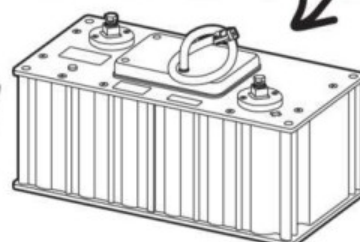
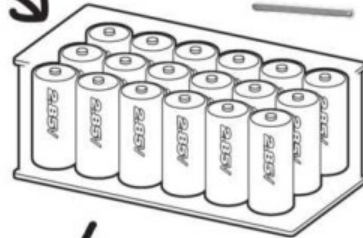
Cells

Maxwell's 2.85-volt ultracapacitor battery cells can withstand shock and vibration, making them rugged enough for trucks and other forms of transportation.



Modules

Maxwell configures the ultracapacitor cells into different-size modules, from 16 to 160 volts, for various applications.



Applications

Ultracapacitors can be found in hybrid vehicles, trains, mobile devices, and heavy industrial equipment. The typical module lasts up to 1 million duty cycles, or 10 years.

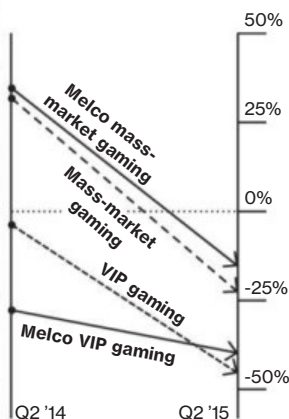
GAMING

MELCO CROWN ENTERTAINMENT

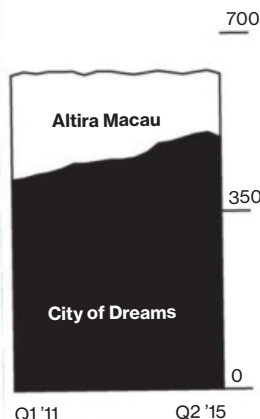
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-14.2%	-64.5%	\$10.49b	\$4.22b	-35.5%

The Macau casino operator's newest resort, Studio City, is part of a shift from high-stakes gambling into more casual gaming and other entertainment. Melco has already cut the number of tables at its VIP casino, Altira Macau, and added tables at the more mass-market City of Dreams.

Macau casino table net
Year-over-year change



Number of tables at Melco locations



FINANCIALS

MITSUBISHI UFJ

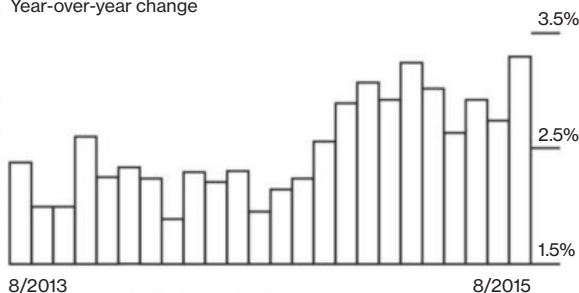
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
1.5%	6.1%	\$2,333.7b	\$49.6b	23.5%

Japanese exporters are coming to the Tokyo-based bank for loans to expand production as a weak yen lifts demand for their products.

U.S. dollars per Japanese yen



Corporate lending by Japanese banks
Year-over-year change



DATA: BANK OF JAPAN

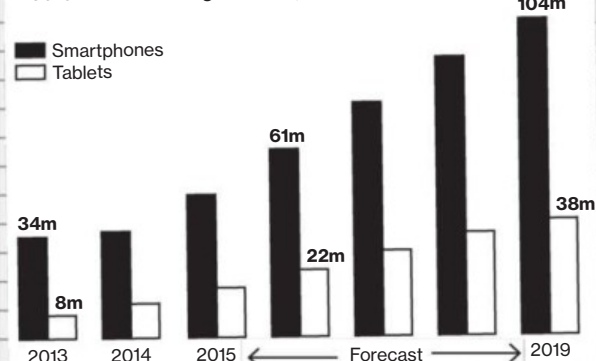
TECHNOLOGY

MICROSOFT

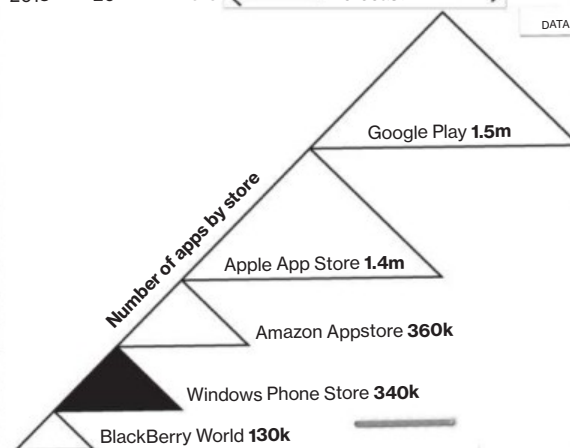
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-1.8%	2.6%	\$176.22b	\$93.58b	-2.3%

Microsoft is hoping the launch of its Windows 10 will help it gain traction in mobile devices. Applications written for Windows desktops now also work on smartphones and tablets.

Mobile devices running Windows, worldwide



DATA: IDC



DATA: STATISTA

MODERN TIMES GROUP

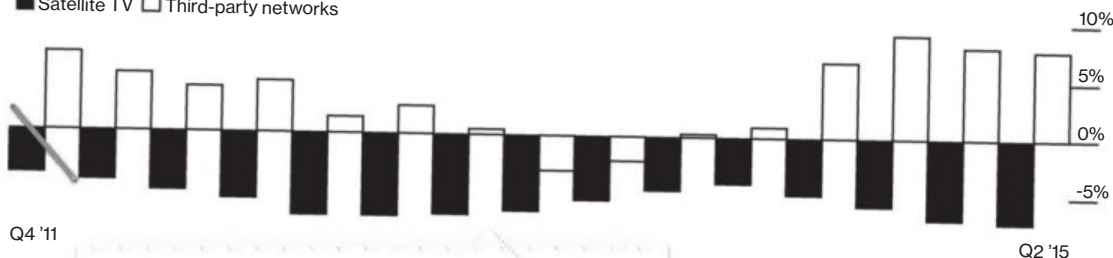
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
3.7%	-27.6%	\$1.61b	\$2.06b	-11.2%

Netflix and other services are luring customers away from the satellite packages offered by Scandinavia's largest TV provider. To compensate, the Stockholm-based broadcasting group is offering its programming through more third-party networks and its own on-demand video service.

Modern Times premium subscriber growth

Year-over-year change

■ Satellite TV □ Third-party networks



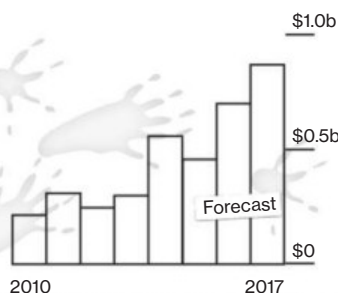
BEVERAGES

MONSTER BEVERAGE

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
11.6%	13%	\$5.79b	\$2.56b	47.2%

Under a strategic partnership with Coca-Cola finalized in June, Monster moved its U.S. distribution onto the soft-drink giant's vast network. With the costly transition almost complete, the energy-drink brand is ready to reap the benefits.

Free cash flow



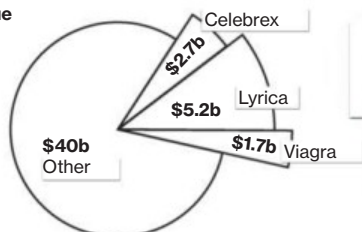
PHARMACEUTICALS

PFIZER

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-3.8%	-7.3%	\$160.88b	\$48.2b	14.6%

Drugs that accounted for almost \$10 billion of Pfizer's sales in 2014 face, or will soon face, generic competition, including nerve pain reliever Lyrica in 2016. The company is counting on acquisitions and new products such as pneumonia vaccine Prevnar 13 to make up for lost sales.

2014 revenue



19%

Share of revenue from billion-dollar drugs losing patent protection from 2014 to 2017.

FINANCIALS

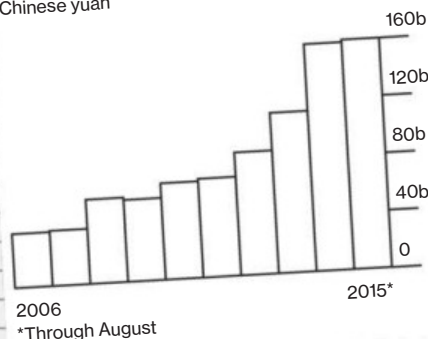
PING AN INSURANCE GROUP

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
3.4%	30%	\$747.32b	\$96.25b	41.2%

China's experiments with tax-subsidized commercial pensions and health insurance plans are opening new lines of business for Ping An, the nation's second-largest insurer.

Health premiums paid to Chinese insurers

Chinese yuan



DATA: CHINA INSURANCE REGULATORY COMMISSION

TECHNOLOGY

QUALCOMM

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS (USD)	12-MONTH SALES	1-YEAR TOTAL RETURN
-5.5%	-12.4%	\$52.3b	\$26.52b	-24.93%

With the global market for smartphones softening and handset makers bringing more chip production in-house, Qualcomm is moving into the expanding market for semiconductors in cars.

Value of chip hardware in Q2 '15

In an average 4G phone

\$60.50

In an average car

\$369.10

UP 11% SINCE Q1 2014

DOWN 18% SINCE Q1 2014

DATA: IDC, ORGANISATION INTERNATIONALE DES CONSTRUCTEURS D'AUTOMOBILES

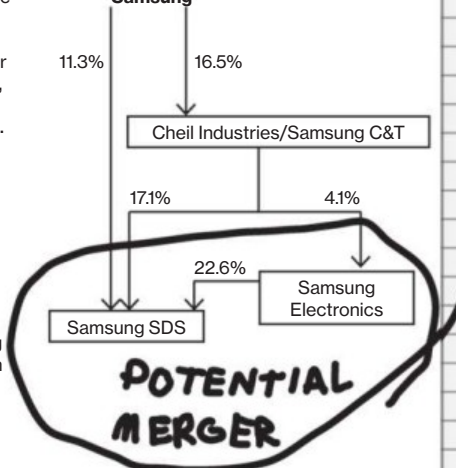
TECHNOLOGY

SAMSUNG GROUP

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-3.3%	13.9%	N/A	\$179.11b	-5%

Jockeying for leadership of the Korean chaebol has begun. A prime contender is Lee Jae Yong, the eldest son of the chairman. Lee has been consolidating units to strengthen his grip on the sprawling conglomerate. His next move may be to merge Samsung Electronics with Samsung SDS, the enterprise services unit.

Lee Jae Yong's holdings in Samsung



TOBACCO

REYNOLDS AMERICAN

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
23.4%	15.8%	\$54.56b	\$8.83b	51.9%

33%

Reynolds's leading share of electronic cigarette sales, which leaves it vulnerable to a push by the U.S. Food and Drug Administration to regulate their promotion and sale.

ENERGY

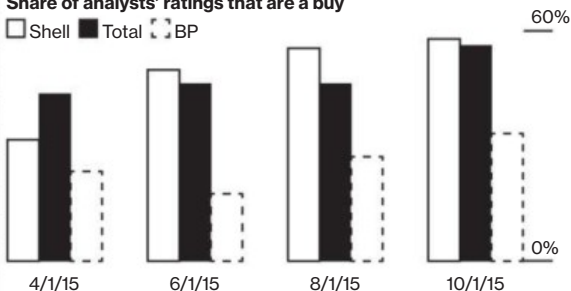
ROYAL DUTCH SHELL

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
-35.8%	-43.6%	\$356.33b	\$338.33b	-27.7%

After the oil price collapse, crashing profits, and an investor exodus, Shell is regaining favor with analysts, who say earnings have bottomed out and will begin to recover. As of Oct. 20, the Anglo-Dutch oil major had more buy recommendations than its peers Total and BP.

Share of analysts' ratings that are a buy

□ Shell ■ Total ▨ BP

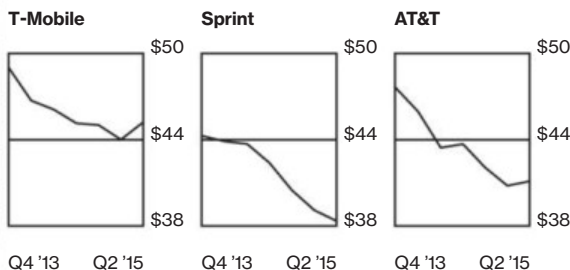


TELECOMMUNICATIONS

T-MOBILE

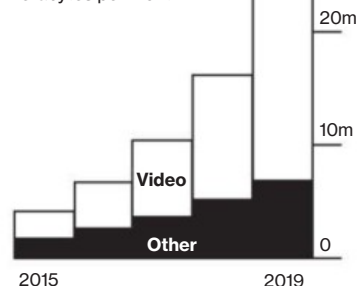
ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
11.1%	280%	\$57.19b	\$31.46b	36%

Average monthly revenue per user



Price competition among wireless service providers has weighed on revenue, but a surge in mobile video streaming is expected to spur demand for data.

Global mobile data traffic, industrywide, forecast



DATA: CISCO VISUAL NETWORKING INDEX

AUTO

TESLA MOTORS

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
52%	N/M	\$6.47b	\$3.7b	-0.1%

57%

Annual growth rate Tesla would need to achieve in each of the next five years to reach its sales goal of 500,000 cars in 2020.

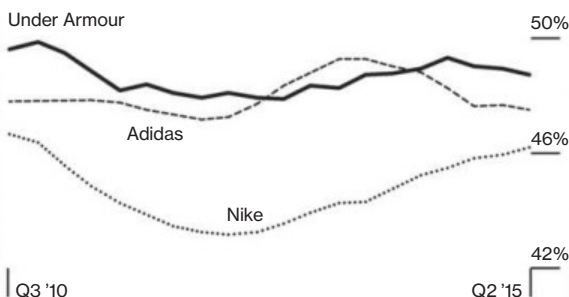
APPAREL

UNDER ARMOUR

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
25.6%	14.0%	\$2.76b	\$3.42b	46.9%

The apparel maker celebrates its 20th anniversary in 2016 and has moved from upstart to established player. The challenge now is to maintain industry-leading profit margins while expanding product lines and distribution.

12-month gross margin



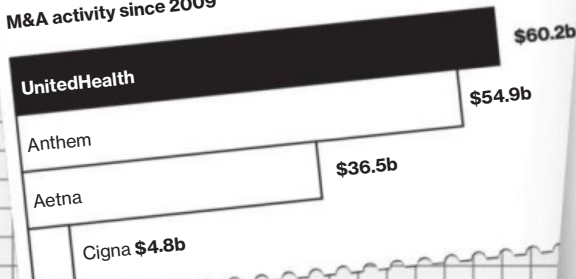
HEALTH CARE

UNITEDHEALTH

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
18.3%	11%	\$91.42b	\$138.21b	41.7%

The No.1 health insurer in the U.S. has made a series of acquisitions in recent years to bulk up its services unit, which provides tools for hospitals and other medical-care providers to improve patient outcomes and control costs. There's speculation that it may move to spin off the fast-growing unit.

M&A activity since 2009



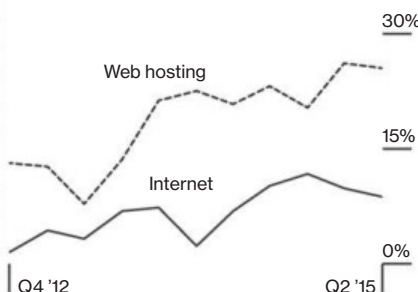
TECHNOLOGY

UNITED INTERNET

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
21.9%	26%	\$4.15b	\$4.16b	32%

Margins in the German company's Web-hosting business are nearly twice those in its Internet-access business, where price competition is more intense. Next year the hosting unit, the largest in Europe, could go public.

Operating margins



MINING

ZIJIN MINING

ESTIMATED SALES GROWTH	ESTIMATED EPS GROWTH	TOTAL ASSETS	12-MONTH SALES	1-YEAR TOTAL RETURN
7.4%	-4.5%	\$12.54b	\$11.75b	3.4%

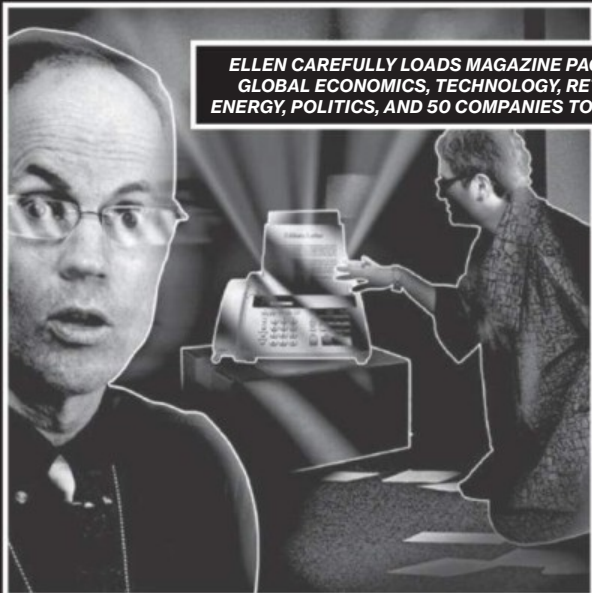
The mining company has been diversifying aggressively, which has softened the blow from the drop in gold prices.

Zijin 2014 revenue by product

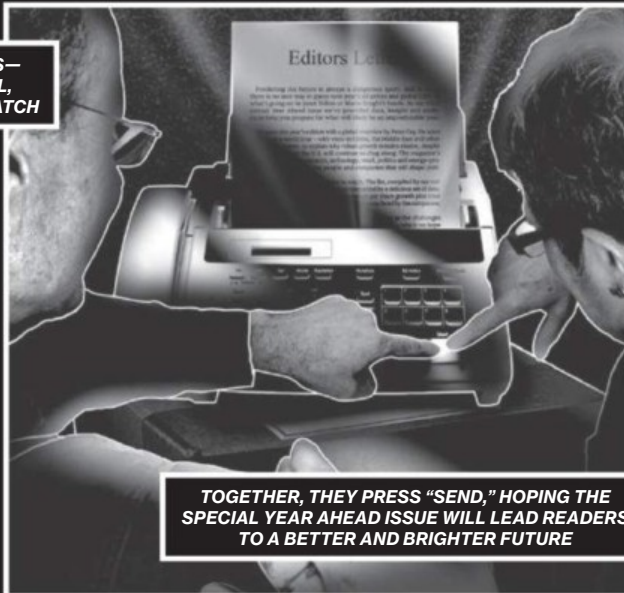
Gold \$5.8b	Copper \$2.2b	Silver, iron ore, and others \$950m	Lead and zinc \$517m
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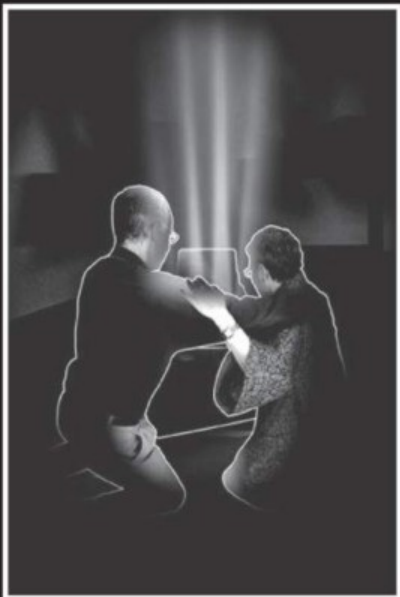
ELLEN AND PETER RUN INSIDE.
TEENS SWARM THE BUILDING



ELLEN CAREFULLY LOADS MAGAZINE PAGES—
GLOBAL ECONOMICS, TECHNOLOGY, RETAIL,
ENERGY, POLITICS, AND 50 COMPANIES TO WATCH



TOGETHER, THEY PRESS "SEND," HOPING THE
SPECIAL YEAR AHEAD ISSUE WILL LEAD READERS
TO A BETTER AND BRIGHTER FUTURE



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THE END

What We Got Right ...

McDonald's Chief Executive Officer Don Thompson was in for a tough 2015, we said. On Jan. 28, McDonald's announced Thompson's exit.

It was "unlikely" in our view that the U.S. Environmental Protection Agency would stick with a proposed 2020 deadline for curtailing coal use. The final rule, released in August 2015, sets goals beginning in 2022.

We predicted, "China will add as much as 15 gigawatts of solar capacity." The nation is projected to reach or exceed that level by the end of the year.

We said the European Central Bank would launch a quantitative easing program in 2015. The ECB began a \$1.2 trillion program in March.

We suggested Germany's 2014 trade surplus was unlikely to shrink in 2015. It's on pace to grow.

... And Wrong About 2015

The right-wing U.K. Independence Party could wreak havoc for the Conservatives in the U.K.'s May elections, we speculated. Instead, it performed below expectations.

Republican strategist Mike Murphy told us that "2015 is a dangerous and difficult time for the dark horse candidates" in the presidential race. Dark horses dominate the early GOP polls.

The Recreational Vehicle Industry Association told us that manufacturers would match their recent record for unit shipments, 390,500. Through September, with 285,049 RVs shipped, they weren't on pace to get there.

We predicted the Reserve Bank of India would keep its benchmark interest rate high. It has cut the rate four times, from 8 percent to 6.75 percent.



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BARBARA BARNES
U.S. AIR FORCE VETERAN

Twelve percent of the adult homeless population are veterans. The New England Center and Home for Veterans works to combat this epidemic by providing housing and support services.

They wanted to expand their facilities to aid more veterans. Citi's expertise in working with government and community organizations put the bank in a unique position to help arrange and provide the needed financing. Once the renovations are completed, the Center will better serve the needs of female veterans and help more people to find jobs and homes of their own.

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